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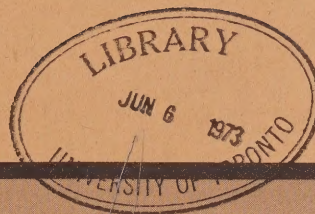


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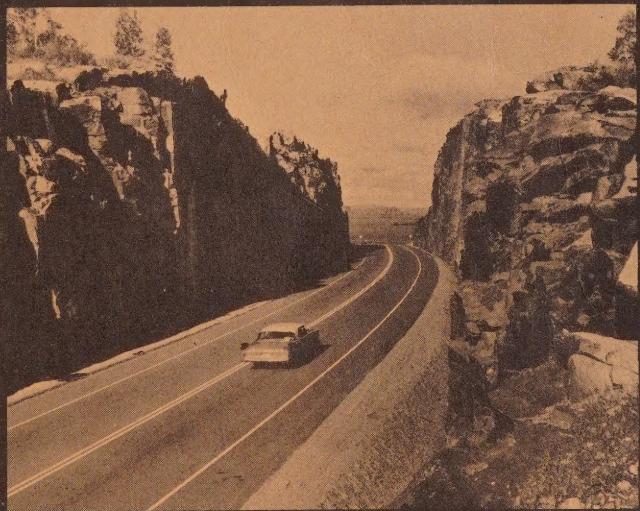
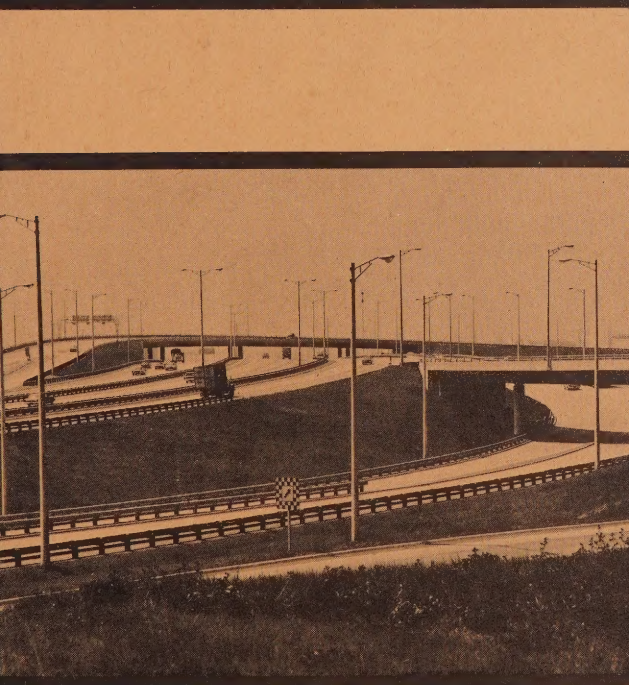


Government
Publications



ANNUAL REPORT

FISCAL YEAR ENDING MARCH 31, 1972



MINISTRY OF TRANSPORTATION AND COMMUNICATIONS

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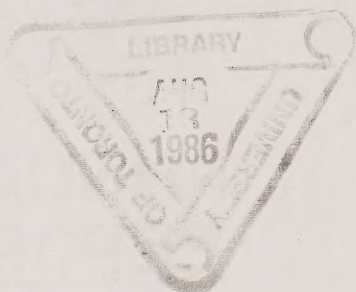
ANNUAL REPORT

For the fiscal year ending

March 31, 1972

Ministry of Transportation and Communications

ONTARIO





Office of the
Minister

Ministry of
Transportation &
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

December 29, 1972

TO THE HONOURABLE WILLIAM ROSS MACDONALD, P.C., C.D., Q.C., LL.D.
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before you the
Annual Report for the Ministry of Transportation and Communications
for the fiscal year ending March 31, 1972.

Respectfully submitted,

A handwritten signature in cursive script, reading 'Gordon Carton'.

Gordon Carton, Q.C.,
Minister



Office of the
Deputy Minister

Ministry of
Transportation &
Communications

416/248-3604

East Building
Downsview Ontario

December 29, 1972

TO THE HONOURABLE GORDON CARTON, Q.C.,
Minister of Transportation and Communications, Ontario

Sir:

I have the honour to present the report of the activities
of the Ministry of Transportation and Communications for
the fiscal year ending March 31, 1972.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "A.T.C. McNab".

A.T.C. McNab
Deputy Minister

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ORGANIZATION

The Ontario Ministry of Transportation and Communications, with headquarters at Downsview, administers five Regions embracing 18 Districts throughout the province.

Like other ministries of the Ontario government, the Ministry of Transportation and Communications is headed by a Minister of the Crown, who is an elected member of the provincial parliament. The Minister is advised on engineering and general policy matters by his Deputy Minister, a senior civil servant with over-all responsibility for the day-to-day operations of the ministry.

The Deputy Minister is aided by three Assistant Deputy Ministers - one responsible for Planning, Research and Communications; another for Engineering and Operations; and the third for Administration. The Deputy Minister is assisted also by the Registrar of Motor Vehicles Division.

The Assistant Deputy Ministers are assisted by a group of Executive Directors, to whom the Directors of the various Divisions report. Regional Directors report directly to the Deputy Minister.

DEPUTY MINISTER'S SUMMARY

The past year has been one of great change and expansion of responsibility in the fields of transportation and communications in Ontario. Transportation remained dominant; but here, too, there was change. The role of the highway was no longer to be one of comparative isolation, but was to become part of a development designed to provide the province with an integrated and balanced system that would make the maximum use of available and projected modes - road, rail, bus, air and water.

The year began with the formation of the Department of Transportation and Communications, a department that combined all the functions of the former Departments of Highways and Transport, and also assumed responsibility for administration of the Ontario Northland Transportation Commission and the Ontario Telephone Service Commission.

The year ended with the emergence of a new title. As a result of the designation "department" being dropped and the term "ministry" being adopted to refer to the various organizational units that report to Cabinet Ministers, the department became the Ministry of Transportation and Communications.

"Transportation and People" - these words might be used to summarize the guidelines followed during the year toward the objective of ensuring maximum social and economic benefits for Ontario. The fact that new modes of transportation had been under study for several years, particularly as applied to mass transit in and around the province's large urban areas, provided much of the base for the current program.

Through increased subsidy assistance to municipalities, the Ministry launched a program to encourage the development and operation of local transit services. In addition, subsidies were offered to municipalities undertaking public transit and road needs studies.

Study and research into new modes of mass transit had advanced at the end of the year to the point where eight of the world's leading developers of transit systems were invited to submit proposals for a demonstration project to be carried out in the Toronto area.

The Ministry moved into the air transport field in October with the inauguration of norOntair, a demonstration air commuter service connecting Sudbury, Sault Ste. Marie, Timmins and Earleton. Information gained from the experiment is expected to be of value in the development of government policies and programs for possible expansion of short-haul air transport systems throughout the province.

Environmental studies kept pace with transportation planning during the year. Teams of experts now investigate all sociological and ecological aspects of Ministry projects. This includes all possible considerations for conservation of landscape, forests and waterways, and assures that transportation systems will be functional with minimal disruption to the balance of nature.

In the communications field, the Ministry is carrying on consultations with federal and provincial authorities on various aspects of electronic transmission where regulatory powers are involved.

Motorists in Ontario, in the meantime, are taking to the highways at an ever-increasing rate. About 3.5 million of them, driving three million vehicles, travelled an estimated 30 billion miles in the province during the year - an increase of close to five percent over the preceding year. The number of registered vehicles kept pace with the increase in mileage, rising by more than 4.5 percent.

If the number of motor vehicles in Ontario continues to increase at the present rate of 100,000 a year, the total will have passed the four million mark by the end of 1980 - a projection that points up further the need for general transportation planning and encouragement to municipalities to develop their own transit resources which has been the major theme of Ministry activities during the year.

Of the Ministry's total gross expenditure of \$595,129,226 for the fiscal year 1971-72, subsidies to municipalities amounted to \$235,074,412, an increase of \$40,463,076 over the preceding year. Total subsidies paid to municipalities over the past five years were over the \$930-million mark.

Following is a summary of expenditures as reported by the Financial Comptroller for fiscal 1971-72, with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	<u>March 31, 1972</u>	<u>March 31, 1971</u>
Gross Capital Payments on Construction of King's Highways, Secondary Highways and GO Transit	\$234,796,492	\$255,021,700
Ordinary Expenditures on King's Highways and Secondary Highways including maintenance and general operating expenses	109,359,702	89,260,978
Provincial subsidies on municipal roads and streets and transportation systems, development roads, roads in unincorporated townships and connecting links	235,074,412	194,611,336
Motor Vehicle Division, including Administration, Vehicle and Drivers, Common Carriers, Motor Vehicle Accident Claims, The Ontario Telephone Commission, and Airstrip Development	15,898,620	19,407,345
TOTAL GROSS EXPENDITURE	<u><u>\$595,129,226</u></u>	<u><u>\$558,301,359</u></u>

Directors of the Ministry's five Regions report directly to the Deputy Minister. Following is a resume of Regional functions and major developments during the year.

Regional Report

Among the many events during the year to influence future Ministry operations in the province was the appointment in June, 1971, of a Director for the Central Region. Where in the past the three Districts of Hamilton, Toronto and Port Hope operated under a regional establishment made up of managers who reported to Branch directors at Head Office, the newly-appointed Director assumed the over-all direction for the Region, as is the case with the four previously-appointed Directors.

Regional organizations are basically pre-engineering operations. Their major functions are to develop transportation and communications systems compatible with the social, economic and environmental needs of the various Regions and to improve communications with federal, provincial and local government agencies and the general public. Other functions include purchase of land to accommodate Ministry transportation facilities, and disposal of surplus land; and provision of special services to the Districts in the areas of soils quality control, and assignment of field staff.

One of the more significant changes during the year was the reorganization in the various Regions of the former Road Design Offices and Functional Planning Offices into a new group known as the Systems Design Offices. This combines the responsibilities of these former Offices into two Sections: the Project Design Section, responsible for carrying out studies and developing designs and contract documents for transportation projects within the Region programmed under the Ministry's five-year construction program; and the Advance Systems Development Section, which is responsible for advance studies beyond the five-year program, review of external development proposals to ensure compatibility with Ministry policies and proposals, and general protection of current and future right-of-way requirements.

In general, the development of a project will now be under the direction of one design group from inception until completion of contract documents, a procedure designed to reduce duplication of work, shorten the pre-contract process and increase productivity.

Another development in the Regions was the amalgamation into Engineering Services Offices of the following Sections: Engineering Surveys, Materials and Testing, Photogrammetry, Structural Planning, and Traffic.

In addition to work on Ministry projects, the recently organized Offices provide services to municipalities ranging from design and inspection assistance to advice on traffic problems.

PLANNING, RESEARCH AND COMMUNICATIONS

Policy Development Division

The Policy Development Division is responsible for developing transportation and communication policies for Ontario. It acts also as liaison with other jurisdictional and government agencies in the fields of transportation and communications.

Communications Branch

Coincidental with the merging of the former Departments of Highways and Transport and other components of the Ministry, the Ontario Government undertook to examine a new major area and endeavour - communications. The new Ministry was directed to study the implications of a provincial telecommunications policy.

This policy would ensure that the interests of the people of Ontario are fully represented in developments associated with radio and television, special purpose video, data transmission systems, telephone and telegraph services, and the use of the Telesat communications satellite.

While proceeding toward the creation of policy options for consideration by the Government, Branch personnel established relationships with federal departments and agencies involved in communications, with their counterparts in other provinces, and enlisted the assistance of appropriate Ministries and agencies of the Ontario Government.

An active role was taken in pursuing the Ontario government's intervention in an application by Bell Canada for a rate increase.

In addition to the responsibility of developing a telecommunications policy, the Communications Branch oversees the day-to-day activities of the Ontario Telephone Services Commission, a provincial regulatory body for 40 independent and municipal telephone systems.

Economic Planning Branch

The Economic Planning Branch is composed of the following Sections: Program Analysis; Transportation Pricing; Forecasting and Market Studies; and Regional and Urban Economic Planning Studies.

The Branch's major responsibilities include the provision of the economic components of area, urban and regional planning studies; financial planning for the Ministry, including preparation of the five-year financial forecasts and the annual estimates; and provision of economic analysis for all parts of the Ministry. The Branch is engaged also in the study of freight rates and their impact on economic development throughout Ontario. These analyses are made by the Regional and Urban Planning Studies Section, the Program Analysis Section, and the Transportation Pricing Section. The Forecasting and Market Studies

Section also provides data research to all other components of the Branch and undertakes specific studies such as: Tobermory Ferry; Ontario Ports; Evaluation of GO Transit Requirements; Economic Impact Studies on Third Level; Air Demonstration in Northern Ontario; and an Evaluation of the Air Strip Program.

In conjunction with its responsibilities in the Policy Development Division, the Economic Planning Branch has undertaken a number of policy reviews, such as: the Aviation Policy Study; the Public Vehicles Regulations Study; and Policy papers on several other aspects of the Ministry, including its relations with federal regulatory agencies, such as the implementation of Part III of the National Transport Act.

Major studies under way include: the Northern Ontario Freight Rate Analysis; the Kenora-Rainy River Transportation Study; the Niagara-Lake Erie Study; the ONR Extension Study; and the Ontario Ports Study.

Research Division

The research staff of the former Department of Highways and Transport were combined in June, 1971, to form the Research Division of the new Ministry. While the research program has been restructured, work has continued on many of the projects already under way before the amalgamation. Some of the more important are referred to in what follows.

Studded Tires and Alternative Traction Aids

Collection and analysis of information on winter road conditions and accidents continues. Evaluation of alternative winter traction aids is being undertaken as these become available from developers.

Behaviour of Bridges

Longitudinal cracking, not anticipated at the time of design, has developed in a number of prestressed concrete bridge decks. Investigations in the field and on structural models have been undertaken, and as a result a much fuller understanding of the structural behaviour of these decks has been obtained and improved design procedures developed. Use of a 200,000 lb. load testing vehicle continues to provide valuable information about the load-carrying capacity of bridges, particularly those designed and built before traffic became heavy.

Highway Safety: Skid Resistance

Several years of study in the development of methods of measuring skid resistance on pavements, along with studies of surface properties that contribute to skid resistance have resulted in a method of evaluating skid resistance of pavements based on the analysis of surface texture by a stereographic system. The system is now being considered by the American Society of Testing and Materials for adoption as a standard method.

Use of Seat Belts

An experimental program of educating children in the use of seat belts was presented to 4,000 pupils in Grades 2 and 3 in two areas of Metropolitan Toronto. The program featured involvement of the children in the practice of using seat belts and in seeing, describing and acting out the consequences of their use and non-use in collisions.

About six weeks after initiation of the program, direct observation of parents of the Grade 2 and 3 children and other parents indicated a doubling of the seat belt use rate for parents of children exposed to the program.

A study of the feasibility of implementing such a program on a broad basis is being undertaken by the Ministry's Safety Office.

Evaluation of Noise Barriers

In view of the mounting problem of noise generated by highway traffic, a full-scale field test of the effectiveness of freeway noise barriers has been carried out. A 6,200 ft. barrier consisting of four different barrier types was constructed along Highway 401 in Toronto for this purpose. Four shorter barriers of different types, constructed along the Don Valley Parkway by the Municipality of Metropolitan Toronto, were also evaluated by the Research Division.

The barriers, about 10 ft. high, were found to be of little benefit, and it was concluded that significant reductions could be achieved only if they were 20 to 25 ft. high, and even then they would be effective only for single-storey houses.

Evaluation of Intermediate Capacity Transit Systems

In December 1971, a project was initiated to evaluate new Intermediate Capacity Transit Systems. The project has three phases. In Phase I, eight developers of advanced urban transit systems submitted detailed technical descriptions of their systems. After a four-month evaluation period, three of the eight systems were to be selected to participate in Phase II - to prepare system designs and cost estimates for a pilot-scale demonstration system on the Toronto waterfront. In Phase III, beginning in April, 1973, one of the three developers will be selected to construct the demonstration system for initial operation and intensive testing in late 1974.

The eight systems evaluated included systems that are highly automated, suspended on rubber tires, air cushions or magnets, and propelled by rotary or linear electric motors on air turbines.

Planning Division

The role of the Planning Division is to prepare short and long term plans covering all modes of transportation for regional and urban areas of Ontario and provide leadership and guidance on transportation to municipalities.

These responsibilities are divided into two branches: Systems Planning, and Environmental and Operational Planning.

Systems Planning Branch

Over the past year, many functions have been grouped into four major Offices. These are Area Transportation Systems, Urban Transportation Planning, Systems Planning Services, and Priority Development. Under this organization many current studies have been expanded to include the investigation of economic implications and the environmental impact of all modes of transportation used for moving people and goods throughout Ontario.

The Area Transportation Systems Office has been applying this broader approach initially on problems of Northern Ontario and the Niagara-Lake Erie area. This procedure is proving to be invaluable for development of future recommendations.

Prominent among the major Urban Studies proceeding in the province are those in Ottawa-Carleton, Waterloo-South Wellington and North Bay.

The Systems Planning Services Office has concentrated on developing information systems, photographic inventory of highways, a study of identifying accident prone locations, specific traffic volume investigations and population and employment forecasts.

The Priority Development Office is studying methods of assessing priorities for allocation of funds to the different systems and jurisdictions responsible for the various modes of transportation. It is further intended to develop priority programs of the improvements to ensure maximum effectiveness of the Ministry expenditures.

Environmental and Operational Planning Branch

This Branch develops comprehensive planning of transportation corridors for all modes in the province's transportation system, working from the broader planning framework developed by the Systems Planning Branch. This phase in the planning process studies the feasibility of various alternative transportation links, giving full consideration to the social, economic and environmental impacts of each alternative on the area in addition to engineering and cost considerations.

In the area of traffic control, the Branch develops the Ministry's traffic operations policy and administers the activities of five regional units to control traffic engineering operations in the interest of maximum safety and efficiency in the systems.

Approximately 60 studies, now in various stages of completion, are being carried out by the Feasibility Studies and Environmental Studies units of the Branch. Half are feasibility studies, many of which involve public participation; the remainder constitute impact of work being carried out by other branches of the Ministry, other ministries, agencies and municipalities.

On the subject of public participation in planning studies, one of the first Ministry projects involving this approach was the Highway 417 Study in Ottawa. As part of the information package, a one-hour television program was videotaped by the CBC and presented in the Ottawa area as a public affairs program.

ENGINEERING AND OPERATIONS

Design Division

The Design Division was formed from the former Design Branch, with expanded functions and responsibilities. The Division is responsible for the design of all Ministry transportation projects. It is divided into two branches: Systems Design and Design Services.

Systems Design Branch

The Systems Design Branch was created by the amalgamation of the former Road Design and Functional Planning Offices. It is responsible for the development, implementation and up-dating of design policies, methods and procedures to be used in the design of transportation projects throughout the province. The Branch consists of the Systems Design Office and the Systems Technology Development Office.

Within the Systems Design Office, the Geometric Design Section ensures that all geometric aspects of a project satisfy safety and operational criteria. The Project Review Section reviewed 306 projects for accuracy and conformity to current policy. The newly formed Drainage Section is responsible for establishing and implementing policy on surface and storm sewer design. The Illumination Section was involved in 138 projects during the year, of which 50 were completed.

The Systems Technology Development Office is responsible for the development of design technology to improve safety, aesthetic and economic quality of design. To carry out these functions, the Office is formed of the following Sections: Automatic Data Processing Section, Environmental Design Section, Standards Section and the Technical Development Section.

Design Services Branch

The Design Services Branch was formed to place all design activities providing all input into design into one Branch. The Branch has seven Offices.

The Structural Office completed the design for 66 structures during the year. Work was completed or is in progress on several structures utilizing special and innovative materials and design features. Some structures on Highway 402, London to Sarnia, were designed, utilizing weathering steel (unpainted) box girders.

Fifty-nine new or revised structural standards were prepared plus standard design procedures for sign supports. Tender forms and specifications were prepared for 101 projects, with a total estimated value of some \$18,500,000. Use of the computer in aiding structural design continued. The Municipal Structural Section inspected 290 old municipal structures and repairs or load restriction by-laws were recommended for 100. Fifty river crossings were investigated to solve hydrology problems. In addition, 154 preliminary plans, 225 final bridge plans, 253 culvert plans and 130 miscellaneous plans were approved.

The Program Office is responsible for the continuous development of the Ministry's capital construction program, and the advertising and award schedules. Pre-contract engineering schedules must be co-ordinated so that contracts will be ready for award in accordance with construction priorities.

The Hydrology Office completed 120 hydrologic investigations during the year. A preliminary standard procedure for measuring the flood-producing characteristics of large drainage basins was completed in 1971. This is the first step in finalizing an overall method for estimating design floods for bridges.

The Soils Office controls the standard of soils design information by reviewing all design data issued by Regional Materials and Testing Soils staff. During the year, 194 soils design reports were reviewed. Fifty-eight projects were investigated using airphoto interpretation techniques. Seismic surveys on 15 projects were completed. Alternate pavement designs for 30 projects were analyzed and presented to the Pavement Selection Committee, and a special report on the performance of asphalt paved shoulders was completed.

The Foundations Office carried out 149 foundation investigations during the year. In addition, the Foundations Office was involved with Golder Associates in the installation of an electronic automatic alarm system in the East Main Street Tunnel under the Welland Canal to monitor the water pressure and keep it within safe limits.

The Engineering Surveys Office is responsible for policy, methods and procedures for engineering survey work in the Regional Offices. It is also responsible for establishing first-order vertical control and third-order horizontal control throughout the province. This year 483 precise level bench marks were established and 1,183 third-order control monuments were established.

There was a continuing increased demand for the various plans and services provided by the Photogrammetry Office. The automatic drafting machine system reached full production status during the year, with increased demands for its service from within the Ministry, as well as other offices within the Government. A total of 36 projects was completed by the Photo Interpretation Section covering 787 square miles. A total of 167 plans were prepared - scales of 200 ft. = 1 in. and 40 ft. = 1 in. covering some 439,553 acres. The Official Road Map of Ontario and Northern Ontario Road Map were revised and 112 County and District Maps were up-dated.

Operations Division

The Operations Division consists of three Branches: the Construction Branch, the Maintenance Branch and the Municipal Branch. The Division covers the entire province through 18 operating districts.

The total number of contracts awarded during the fiscal year was 335,181 for construction and 154 for maintenance.

Construction Branch

This Branch is responsible for the construction program of the entire province, producing and revising contracts and general specifications, direction of the Operations Branch Technical Training Program, control of construction personnel, and the revising of manuals pertaining to construction.

The freeway reconstruction program continued on schedule during the year on the Toronto By-Pass. Completion of the interchange complex at the junction of Highways 401 and 427 finished the widening of Highway 427 (formerly 27) from the Queen Elizabeth Way northerly to Highway 401.

Reconstruction of Highway 401 east to McCowans Road was completed and widening to Highway 48 proceeded.

Construction of the Kitchener-Waterloo Expressway, Highway 417 east and west of Ottawa, the Hanlon Expressway in Guelph, and the E.C. Row in Windsor proceeded as scheduled.

The East Main Tunnel in Welland under the Welland Canal was substantially completed and was expected to be opened to traffic early in the next fiscal year.

Last fall, 26 miles of Highway 400 leading from Metropolitan Toronto to the Muskoka area were widened to six lanes, and work is currently under way to widen an additional 25 miles of this heavily travelled route to the six-lane standard. The project involves construction of a new interchange at Barrie and is scheduled for completion late in 1972.

In addition to the large freeway and tunnel projects, reconstruction of various major and secondary highways and the building of many new structures were undertaken during the year.

Totals of work done during the year in the five Regions included 640.7 miles of bituminous hot mix pavement and construction of 551.5 miles of grading and culverts. Following are a few of the many projects undertaken.

Southwestern Region

Chatham, London, Stratford and Owen Sound Districts

The first grading and drainage contract on Windsor's E.C. Row Expressway was completed. This involved placement of approximately one million cubic yards of fill in embankments and construction of 968 linear yards of triple cell concrete culvert to carry the Grand Marais Drain under the expressway.

Work on the Hanlon Expressway, City of Guelph, was started and the first stage between Waterloo Avenue and Stone Road was nearly completed.

Central Region

Toronto, Hamilton and Port Hope Districts

Freeway construction in Metropolitan Toronto saw completion of the Highways 401 and 427 Interchange, the largest interchange in Canada encompassing 385 acres with 28 bridges and the equivalent of 29 miles of two-lane pavement in interchange ramps. In conjunction with this interchange, a section of Highway 427 running southerly from the interchange to just north of Highway 5 was completed, and this completes the Highway 401, 427 and QEW link around the west end of the City of Toronto.

Widening of the QEW to six lanes was completed and opened to traffic from Bronte Road Interchange to Guelph Line. This completes the widening of the QEW to six lanes

from Toronto to Highway 403 at Burlington. Work continued at Niagara Falls on a high-speed interchange that will connect Highway 20 and the QEW and eliminate the traffic circles at the QEW and Dorchester Road.

Two contracts were completed for the widening of Highway 7 from Brampton to Highway 27. This completes a four-lane facility from Brampton to Highway 11, a distance of 20 miles.

Eastern Region

Kingston, Ottawa and Bancroft Districts

On Highway 2, resurfacing was carried out from Prescott east limits easterly for 11.7 miles.

On Highway 7, resurfacing for 14.3 miles from 6.6 miles west of Highway 37 to 5.1 miles east of Highway 37, including the Madoc Diversion was completed.

On Highway 41, grading, drainage, granular base and hot mix paving from Highway 132 southerly for 8.3 miles was completed. A major feature of this job was the diversion of Highway 41 to by-pass the Magnetic Hill on old Highway 41 in order to preserve it as an attraction to the motoring public.

Northern Region

Huntsville, Sudbury, North Bay and New Liskeard Districts

On Highway 11, grading, drainage, granular base and hot mix paving was completed from the north junction of Highway 66 northerly for 12.4 miles and from 0.6 miles north of Wavell Road northerly for 5.06 miles.

On Highway 65, grading and hot mix pavement was completed from 8.1 miles east of Kenabeek westerly for 17.5 miles.

On Highway 101, grading, drainage, granular base and hot mix paving was completed from 14.7 miles west of Foleyet westerly for 15.3 miles.

On Highway 144, hot mix paving was completed from Cartier northerly for 38 miles.

On Highway 614, hot mix paving was carried out over 19.9 miles from Manitouwadge southerly as well as some of the town streets in Manitouwadge. With completion of this contract all of Highway 614 from Highway 17 northerly to Manitouwadge will be paved.

Northwestern Region

Cochrane, Sault Ste. Marie, Thunder Bay and Kenora Districts

On Highway 17, from the town of Schreiber easterly for 3.5 miles grading, drainage, granular base and hot mix paving was completed.

On Highway 72, grading and paving was completed from the junction of Highway 116 northerly for 4.9 miles.

On Highway 116, grading and paving was completed from 3.2 miles west of the junction of Highway 72 westerly to Hudson, a distance of 7.5 miles.

On Highway 590 from Highway 130 westerly for 3.9 miles, grading, drainage, granular base and hot mix paving were completed.

On Highway 800, from 7.3 miles north of the Thunder Bay Expressway, a 13-mile section was paved.

Summary of Road Mileages in Ontario As of March 31, 1972

	<u>Concrete</u>	<u>High Class Bituminous</u>	<u>Low Class Bituminous</u>	<u>Gravel</u>	<u>Total</u>
King's	390.7	8,269.7	823.7	317.7	9,801.8
Secondary	-	214.8	822.5	1,941.2	2,978.5
Tertiary	-	24.4	-	193.1	217.5
TOTAL	<u>390.7</u>	<u>8,508.9</u>	<u>1,646.2</u>	<u>2,452.0</u>	<u>12,997.8</u>

Materials and Testing Office

The principal functions of this Office are to provide technical guidance and training in the selection and use of materials and products, to perform the testing and inspection necessary for quality assurance, and to undertake investigational and development projects.

The normal annual increase in the Office's operations continued, with a 40 percent increase in foundation soil testing, indicating the high level of activities in that area. Some of the more interesting developments during the year included:

To minimize pollution that might affect fish, wild life and plant growth, a new bridge paint system has been adopted. applied by brush, the new system overcomes the objection of overspray and as only two, rather than four coats are required, application costs have not increased; and the change from white to yellow traffic paint for centre line markings has been accompanied by a change to a lighter colour of yellow paint. Improved night-time visibility should result in increased safety.

Maintenance Branch

This Branch directs and controls all summer and winter maintenance carried out by the Districts on all King's Highways and Secondary Highways throughout the province.

Roads snowplowed and kept open during the winter months totalled 15,225 miles. Salt for de-icing roads totalled 375,542 tons and sand used for winter maintenance, 860,430 tons.

Approved planting projects carried out during the year accounted for more than 80,000 trees and shrubs; and 550 large trees were relocated in the process of road

construction. More than 16,000 trees were removed for the safety of the travelling public.

Grass seeding operations totalled 21,363,760 square yards, and 27,015 gallons of liquid herbicide and more than 56,000 lbs. of wettable powder herbicides were applied in the control of weeds and brush. More than 26,000 lbs. of thickening agents were applied in the process of drift control operations; and use of specially-fabricated off-road equipment was introduced for the application of invert-type spray as a further drift control measure.

The Structural Maintenance Section inspected approximately 1,400 bridges on main and Secondary Highways during the year and, where necessary, made recommendations to District Engineers regarding repairs and load restrictions. Contracts were let for the cleaning and repainting of several steel structures, and additional contracts were let for the underwater investigation of 39 bridges.

Recommendations for application of a water-proofing membrane on concrete bridge decks were made to the Districts and plans were prepared for the replacement of 16 expansion joints. Seven temporary structures consisting of Bailey bridges were designed, and several additional Bailey bridges were designed or checked and built by District Day Labour or Municipal forces for indefinite use as replacements or reinforcements for substandard structures.

During the year Ministry electrical crews installed 2,335 highway lighting fixtures at 157 different projects; and installed 69 traffic signals and 58 flashing beacons.

The Ministry had 22 strippers in operation during the year, 19 dual and three single machines, which zone painted 12,115 miles of King's and Secondary Highways. In addition, yellow paint was applied along the pavement edge for a total of 4,030 miles.

Mulch pavement mixed and laid by Ministry forces totalled 47.3 miles in six Districts.

Working in the Cochrane and Thunder Bay Districts, the Ministry crusher produced 137,923 tons of 5/8" crushed gravel, of which 38,130 tons were placed directly on Secondary Highways in these Districts. The balance was stockpiled at various locations for future maintenance requirements.

District forces manufactured and erected 118,660 signs of various types and sizes during the year.

The Ministry maintains five free ferries at three locations in the province.

Two ferries operating between Kingston and Wolfe Island logged a total of 9,170 trips during the year and carried a total of 181,911 motor vehicles. Moreover, two ferries operating between Adolphustown and Glenora made a total of 21,513 trips and carried a total of 210,510 motor vehicles.

A single ferry operating between the mainland and St. Joseph Island made 20,701 trips during the year and carried 239,168 motor vehicles.

Building Permits issued during the year by the Sign and Building Permits Section totalled 6,146 with a valuation of \$251,416,709; and 5,998 Field Advertising Signs were issued with a valuation of \$66,668. Other permits issued included 3,200 Entrance Permits and 1,043 Encroachment Permits; and 1,919 Sign Permits were issued and 5,458 were renewed.

Municipal Branch

The 1971 subsidizable expenditures by the municipalities increased by approximately \$77,202,000 over 1970, and by \$239,795,000 over 1961.

Subsidies Section

During the year under review, 920 municipalities and 49 Indian Reserves received subsidies under The Public Transportation and Highway Improvement Act for expenditures in 1971. Aggregate amounts were:

	ROAD MILEAGE	APPROVED EXPENDITURE	SUBSIDY
Metro Toronto			
Roads	387.2	\$ 32,244,605	\$ 16,122,303
Subway	-	33,347,307	16,673,653
Counties*	10,560.8	75,949,282	40,221,425
Townships**	51,133.1	104,770,392	60,616,563
Urban	<u>14,549.7</u>	<u>135,493,150</u>	<u>67,926,254</u>
Grand Total	<u>76,630.8</u>	<u>\$381,804,736</u>	<u>\$201,560,198</u>

* Includes Suburban Commissions and Regional Municipalities

** Includes Boroughs, Improvement Districts and Indian Reserves

COUNTY ROADS

The 1971 expenditures on County, Suburban Road Com missions and Regional Municipalities were as follows:

	CONSTRUCTION	MAINTENANCE	TOTAL
Roads	\$42,899,341	\$16,043,009	\$58,942,350
Bridges and Culverts	6,894,691	658,636	7,553,327
Winter Control	-	9,453,605	9,453,605
Total approved expenditures	<u>\$49,794,032</u>	<u>\$26,155,250</u>	<u>\$75,949,282</u>

Some understanding of the magnitude of the work represented by these figures can be gained from the following summary of the work performed:

1. ROADS
333.64 miles completed at a total average cost of \$90,130 per mile.
2. BRIDGES AND CULVERTS
 - (a) Bridges (20 ft. span and over)
59 bridges completed at a total average cost of \$33.17 per square foot of deck area.
 - (b) Structures (under 20 ft. span)
Total number completed 55
 - (c) Pipe Culverts installed 2886

MAINTENANCE

OPERATION	MILES MAINTAINED	AVERAGE COST PER MILE
1. Roadside	10,664	\$ 246.00
2. Hard Top	8,419	588.00
3. Loose Top	2,250	1,413.00
4. Winter Control	10,669	811.00
5. Safety Devices	10,669	163.00
6. Bridges and Culverts	10,324	86.00

The Ministry is continuing to encourage the larger townships and towns in the province to carry out Road Needs Studies. These studies assist the elected and appointed officials in managing their road systems by identifying capital construction requirements and the fixed cost needs of maintenance and administration.

During the past year, work was carried out on 30 studies, 14 of which were completed and reports published. Work is continuing on the remaining 16 studies.

Municipalities continued to submit pre-engineering data for road construction projects during the year. Some 1,638 Design Criteria data sheets were received by the Ministry detailing the proposed geometric standards, estimated costs and type of road improvement desired. The data involved 1,683 miles of road construction and required some inspection on work sites to determine the design features best suited to the local conditions.

In addition to the design data received, preliminary drawings, contract plans and tendering documents for 465 projects accounting for 601 miles of road work were reviewed.

The Urban Program Section represents the Ministry in the planning, design and implementation of Connecting Link projects undertaken by urban municipalities and subsidized by the Ministry. During the year, 71 such projects were processed. The total value of the work was \$16,898,000, of which the Ministry paid \$9,995,000.

REGISTRAR OF MOTOR VEHICLES DIVISION

As noted earlier in the Deputy Minister's Summary, organization of the Ministry of Transportation and Communications involved the former Department of Transport; and an important function of that Department was that of the Registrar of Motor Vehicles Division.

The Division deals with all aspects of driver and vehicle safety in the province.

Statistically speaking, during the period from 1962 to 1971, Ontario's population, licensed drivers, motor vehicle registrations and motor vehicle collisions were on the rise.

During those years, traffic deaths increased from 1,383 to 1,769, and the population grew from 6.4 million to 7.0 million. Despite these increases, the fatality rate per 100,000 population did not show any identifiable trend, varying from a low of 20.1 in 1970 to a high of 24 in 1967. The 1971 figure was 22.7

In contrast to this trend, the number of persons injured increased steadily, noticeably so in 1971 to a high of 108.5 per 10,000 population, compared to a low of 65.8 in 1962.

In 1971, there were 158,831 reported motor vehicle traffic collisions, an increase of 12.2 percent over 1970; the number of persons injured increased by 15.2 percent; and the number of persons injured increased by 12.7 percent.

The increase in miles driven in 1971 was 10.7 percent over the 1970 figures.

Driver Branch

The Driver Branch of the Division is responsible for the examination, licensing and control of drivers. The chief functions of the Branch include operation of 160 driver-testing facilities throughout the province, administration of the Demerit Point System, maintenance of all driver records on the computer system, licence suspensions and reinstatement of driving privileges.

In 1971, Ontario's driver population increased by 140,305, or 4.1 percent over 1970, for a total of 3,563,197 licensed drivers. Of this total, 1,312,568, or 36.8 percent, were female.

During the year, driver road tests were given to 382,909 persons applying for original licences and being examined for various reasons. The failure rate on the first try was 28.7 percent.

About 850,000 certificates of conviction for traffic violations were recorded. On the basis of these records, 46,614 suspensions of driver licences were applied as compared to 43,626 the previous year. Of these, 1,075 were suspended under the discretionary authority

of Section 27 of The Highway Traffic Act after the individual in each case was afforded the opportunity of a hearing. Most of the suspensions were for medical reasons.

Under the Demerit Point System 77,592 warning letters were issued to drivers at six to eight points; 26,124 drivers were interviewed and re-examined at nine to 14 points. Of the total of 5,496 point system suspensions, 3,650 were at 15 points; 1,434 for failing to attend interviews; and 412 for failing to show cause why their licences should not be suspended.

Vehicle Branch

The Vehicle Branch administers The Public Commercial Vehicle Act, The Public Vehicle Act, The Motor Vehicle Transportation Act Canada, The Motorized Snow Vehicle Act and those sections of The Highway Traffic Act which relate to licensing, inspection and regulation of vehicles. The Branch is composed of the following Sections:

Oversize-Overweight Permit Section, which issued 26,000 permits for the movement of over-dimensional or overweight loads and vehicles after careful examination of thy public interest.

Highway Carrier Section, which not only has the responsibility of the licensing and regulation of "for hire" trucks and buses, but has a further responsibility to enforce the provincial weight laws in order to provide protection for highway users and for the highway system itself. A staff of 277 throughout Ontario operates 45 weigh scale locations, 65 patrol vehicles and 12 portable scale units. The Section reports that its enforcement activities in 1971 resulted in 8,082 convictions, of which 2,517 were related to infractions in respect of the weight of loads and vehicles.

Vehicle Licence Section, which is responsible for the registration of all motor vehicles, trailers and motorized snow vehicles required to be registered. Service is provided by 278 appointed licence issuing agents across the province. In addition, six Ministry offices provide this service at Ottawa, Hamilton, Mississauga, Stratford, Oshawa and Queen's Park, Toronto.

Motor Vehicle Registrations - 1971

Passenger	2,497,307 /
Truck and Tractor	430,371 /
Bus	13,611 /
Station Wagon	215,747
Trailer	380,054
Motorcycle	53,127 /
Transfer of Ownership	1,295,882
Motorized Snow Vehicle (November 1, 1970 to March 31, 1972)	223,914

The Vehicle Inspection Section administers Section 58 of The Act, which provides that a certificate of mechanical fitness be filed on application for the transfer of the registration of a motor vehicle. In 1971, 820,092 certificates of mechanical fitness were submitted to the Ministry as evidence of compliance with the prescribed motor vehicle safety standards. The number of inspections totalled 902,242; this represents approximately 30 percent of Ontario's used motor vehicle population.

Safety Office

In November 1971, a new Safety Office was organized to bring together all safety functions previously performed by the Highway Safety Branch in the Registrar's Division of the former Department of Transport; the Highway Safety Office in the Planning Division and the Accident Prevention Section in the Personnel Branch, both with the former Department of Highways.

Basic functions are to develop and carry out highway safety programs aimed at problem areas indicated in fatal and non-fatal highway accident statistics; to initiate and conduct programs of public safety as they pertain to all modes of transportation; to recommend changes in legislation which affect the safe transportation of the public; and to organize and operate staff safety programs.

Establishment of approved courses in driver instruction in secondary schools is supported and encouraged by the Safety Office. During the 1971-72 academic year, 543 of 575 high schools in Ontario participated and more than 30,000 students completed the course successfully.

The 18th in a series of regional conferences on road safety was held in London in January 1971, a gathering that brought together a representative group of 783 community leaders in the area to talk about the motor vehicle accident problem.

ADMINISTRATION

Finance and Supply Division

Services Branch

The Services Branch of the Finance and Supply Division provides a variety of essential services, including supplies, equipment and buildings.

The Supply Section of the Branch is responsible for the purchase and distribution of most construction and maintenance materials purchased by the Ministry. The total value of orders issued by the Purchasing Office on behalf of the Ministry totals about \$40-million a year.

In the summer of 1971, the Ministry was given the responsibility for ordering of all motorized equipment on a Government-wide scale. Value of vehicles ordered for other Ministries was close to the \$6-million mark during the fiscal year.

The Material Control unit of the Supply Section disposes of all used equipment and surplus materials, including all used vehicles removed from service by all Ministries of the Ontario government. Vehicles are normally sold at public auction, with other materials being offered by invitation tender. Revenue accruing from these sales during the year was about \$600,000.

Since central purchasing of Government vehicles was introduced in September, 1971, the Equipment Section of the Services Branch has processed about 1,800 vehicles for other Ministries and 600 for the Ministry of Transportation and Communications. The total equipment budget was \$10-million.

One of the most interesting projects undertaken by the Equipment Section during the year was the designing and installation of the Amherst Island Ferry Channel De-icing System. As far as is known, this is the longest air bubble de-icing system installed in North America — 2-3/4 miles long. The project was a success and, for the first time ever, ferry operation was maintained throughout the winter.

The Special Services Section acts for the Ministry in liaison with the Ministry of Government Services in all matters pertaining to buildings, building sites and office and shop accommodations. The Section is responsible for all communication facilities within the Ministry, and for the administration of Service Centres on controlled access highways.

Among the more unusual communications projects was the installation of a television surveillance system at the Port Dover bridge in the London District to overcome a hazardous lack of visibility by the bridge operator during bridge-lifting procedures.

Twenty-three Service Centres were in operation at the end of the year, 19 on the Macdonald-Cartier Freeway and four on Highway 400.

Approximately 19,000 tenders were received and processed by Tenders Section for 3,600 contracts and sales during the year by this Section, which processes all tenders on engineering projects, supply contracts, obsolete equipment, material sales and special services projects. More than 2,800 contractors and suppliers attended tender openings arranged by the Section during the year.

The Graphic Arts unit of the Art Design Section completed 502 projects during the year. Ranging from designs and illustrations to scale models, the work included graphs and charts, posters and signs and silkscreen assignments.

Eight exhibits constructed in the Section's display shop were shown at four major exhibitions and 10 other exhibitions. Other projects included a wooden replica of Ontario's Coat of Arms, construction of two "stol" aircraft models and four animated monorail models.

Right-of-Way Branch

The Right-of-Way Branch comprises the Land Surveys and Property Offices which are responsible for the legal land surveys and the property acquired by the Ministry.

The Land Surveys Office develops and formulates policies and procedures for legal land surveys, plan preparation and registration and associated functions affecting the survey organization of the five Regional Offices which form an integral part of the Right-of-Way function. The Regional Offices prepared 2,679 plans which were registered in the appropriate registry and land titles offices during the year. An additional 244.81 miles of highway were designated as controlled access highway, bringing the total mileage of such highways to 2,827.84 miles.

Continuing its program to co-ordinate control surveys on highways throughout the province, Land Surveys has established 4,200 miles of control surveys with 6,900 control survey monuments evaluated on the Ontario Co-ordinate System.

The Land Surveys qualifying examinations for field and drafting staff were tried by 95 candidates, of whom 50 passed. The apprentice program for Ontario Land Surveyors is being continued and during the year nine apprentices passed the Final Part 1 examinations and six passed the Final Part 2 examinations.

The Property Office develops policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands and quasi-legal aspects of the purchase of real estate in the title searching and conveyancing functions.

Using these policies and procedures, staff in five Regional Offices contacted approximately 5,000 owners to provide property for current and future construction projects. Although 3,714 agreements were negotiated with property owners on the continuing practice of acquisition by amicable settlement, the Ministry did expropriate 662 properties to obtain title for land required to permit contracts to proceed as scheduled.

The Ministry expended \$33,848,477 in payment of compensation to approximately 3,300 owners in acquiring title to lands required for highway projects. An additional \$3,045,495 was paid to 400 owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue in the amount of \$1,046,921 from the sale of surplus lands and \$328,654 from leasing properties for residential and agricultural purposes was received by the Ministry.

The extensive training program was continued and affected 68 staff, of whom 59 successfully completed the courses attended. Supplemental assistance was granted to 22 employees to provide training in appraising and legal clerk courses.

SPECIAL REPORTS

Transportation Operations Branch

This Branch is responsible for the administration of all public transportation systems operated by or for the Ministry. These include the Lakeshore Commuter Rail Service operated by the Canadian National Railways, Commuter Bus Services operated by Gray Coach Lines and Trailways of Canada, the Bay Ridges Dial-a-Bus service operated by the Ministry and norOntair, a demonstration air service operated for the Ministry by White River Air Services Limited.

GO Transit carried 5.5 million train passengers and 3.4 million bus passengers during the fiscal year, a total increase of 1.8 million passengers over the preceding year.

The Ministry moved into the air transport field in October, 1971 with the launching of norOntair, a demonstration air commuter service connecting Sudbury, Sault Ste. Marie, Timmins and Earlton-Northeastern Ontario centres, which up to that time had lacked interconnecting air service on a regularly scheduled basis. Information gained from the program is expected to be of value in the development of programs for possible expansion of short-haul transport systems in other parts of the province.

Ontario Northland Transportation Commission

The net profit of the Commission for all operations (including Star Transfer) for 1971 was \$1,007,054, up \$749,936 over the preceding year. Total gross revenue for 1971 was a record \$33,568,808, due largely to increased movement of copper, lead and zinc concentrates and fuel oil, together with an increase in the number of long distance phone calls.

Expenses increased by \$1,669,145, mainly because of wages and fringe benefits, a serious derailment, and increased commissions paid to long distance telephone companies.

Carload Freight

Carload freight revenues increased by \$17,274,315, up 6.36 percent over 1970. Freight growth during 1971 was due largely to increased transportation of both raw and manufactured materials, primarily from the marketing of metal concentrates, lumber, newsprint and iron ore pellets.

Express Freight

Revenue from express freight operations increased by \$11,725 over 1970 and a program to update equipment and facilities continued with replacement of delivery trucks and improvements at various terminals.

Passenger Services

Revenue from regular bus services increased by 11.5 percent and that from bus charters by 34 percent. Railway passenger revenue was up more than five percent, due largely to the increasing popularity of the summer excursion train, the Polar Bear Express, which was inaugurated by the Commission in 1964. More than 21,500 passengers were carried on this train between June 13 and September 12. All levels of the economy in Northeastern Ontario are benefiting from this tourist attraction.

Communications

Communications revenues were up 10.7 percent over the previous year. Expenses were held to an increase of 8.6 percent, with the result that net revenues were up \$338,000 or 15.3 percent.

Ontario Highway Transport Board

Board Sitzings

The Board continued its program of visiting various sections of the province during the year and considered applications in Ottawa, London, Kitchener, Milton, Sudbury, Thunder Bay, Sault Ste. Marie, Windsor, Brantford, Simcoe, Hagersville, Aurora and Minden, in addition to Metropolitan Toronto.

Applications received by the Board totalled 2,829, of which 1,660 were related to The Public Commercial Vehicles Act; 535 to The Public Vehicles Act; and 634 to The Motor Vehicles Transport Act (Canada).

Reviews

The Board conducted 163 reviews of public commercial vehicle operating licences. Some of the reviews were to clarify the terms of the carrier's authority, others to ascertain the financial stability of licensed holders. The majority of reviews was held as a result of the continued disregard by the carrier to the requirements of The Public Commercial Vehicles Act, The Highway Traffic Act and The Motor Vehicle Transport Act. The most common offences were overloading equipment, failure to have licence plates on equipment, and operating outside or beyond the terms of the carriers' licensed authority.

Following is the statement of revenue of the Ontario Highway Transport Board:

Revenue 1971

Application fees	\$90,835.00	
Hearing costs	32,355.54	
Leases	3,875.00	
Fees for copies of certificates, etc.	2,288.50	
		<hr/>
		\$129,354.04
Tariffs of Tolls		82,116.00
Gross Revenue		211,470.04
Less refunds re applications and tariffs		2,455.25
		<hr/>
<u>Net Revenue</u>		<u>\$209,014.79</u>

Ontario Telephone Service Commission

This Commission is responsible for administration of The Telephone Act, an Act regulating the operations of Independent Telephone Systems created under Statutes of Ontario; and for provision of management, engineering and technical advice to Independent Telephone Systems.

As of January 1, 1972, there were 42 Independent Telephone Systems operating in Ontario with approximately 195,000 phones and an estimated total capital expenditure of almost \$82-million. Telephone service in the province is provided by the Independents, by Bell Canada, with more than 3,800,000 phones, and by the Ontario Northland Communications System, which operates long distance lines in Northern Ontario and Quebec and provides local service to a few customers.

Information Services

The Information Services Office is responsible for providing information to the public on Ministry activities, primarily through newspapers, radio and television. In performing this function, the Office prepares and distributes news releases and photographs, prepares articles on request for newspapers, the trade press and other media, arranges for publication and distribution of the official Ontario and Northern Ontario road maps, and assists in the preparation of material for exhibitions and fairs in which the Ministry is represented.

One of the major public services is provision of information by phone about road conditions across the province. Operating on a 24-hour basis during the winter months, the Road Information unit answers an average of 100,000 calls between November and April and, in addition, provides live broadcasts to radio stations.

Information Services also provides a variety of publications during the year, including the Annual Report, which is a summarized account of the Ministry's yearly activities; the Road Bulletin, which is published during the summer construction months and lists all construction areas on the province's highways; the MTC News, the monthly employee publication; and brochures of general interest covering various aspects of transportation.

The Office maintains a Press Clipping Service from Ontario newspapers to provide a day-to-day record of transportation news coverage; co-ordinates material for speeches re Ministry activities; provides scripts for television and motion picture presentation; answers thousands of letters and mails out several thousand pieces of literature annually; and provides pictures to the media covering all aspects of the Ministry's operations.

MINISTRY EXPENDITURE BY HIGHWAYS

April 1, 1971 to March 31, 1972

MINISTRY EXPENDITURE BY HIGHWAYS

April 1, 1971 to March 31, 1972

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Quebec Border - Windsor	\$ 2,100,327	\$ 2,246,837
2A	Hwy. 401 (M.C.F.)-Hwy. 2 (Toronto)	10,716	-
3	Fort Erie - Windsor	2,806,949	1,386,603
3A	Hwy. 58 (Welland)-Hwy. 3	-	2,182
4	Port Stanley - Flesherton	1,427,590	620,786
5	Toronto - Paris	787,026	275,209
6	Port Dover - Tobermory	2,188,713	1,139,620
7	Ottawa - Sarnia	9,358,637	2,074,016
7A	Hwy. 115-Hwy. 12 (Manchester)	395	139,615
8	Niagara Falls - Goderich (7)	1,443,913	413,407
8A	Queenston - St. Davids	-	403
9	Hwy. 11 - Kincardine	234,413	695,284
10	Port Credit - Owen Sound	1,257,959	531,723
11	Toronto - Rainy River	6,734,828	5,955,017
12	Whitby - Midland (7)	1,765,371	382,304
14	Bloomfield - Marmora	404,189	146,730
15	Kingston - Ottawa (7)	95,457	273,376
16	Johnstown - Ottawa	74,609	213,756
17	Quebec Boundary - Manitoba Boundary	5,885,581	4,075,088
18	Leamington - Windsor	38,638	149,719
18A	Kingsville - Hwy. 18	4,925	47,750
19	Port Burwell - Tralee	101,620	417,857
20	Niagara Falls - Hamilton	1,376,699	270,340
21	Hwy. 3 (Marpeth)-Owen Sound	118,186	682,523
22	London - Hwy. 7	23,405	96,302
23	Hwy. 7 - Hwy. 9, (Teviotdale)	9,122	223,878
24	Port Dover - Collingwood	1,055,499	495,997
24A	Paris - Galt	530,274	39,862
25	Oakville - Hwy. 24 (Ospringle Mills)	792,064	121,413
26	Barrie - Owen Sound	1,317,832	319,730
27	Toronto - Penetanguishene	5,587,875	951,142
28	Port Hope - Bancroft	267,247	320,339
29	Brockville - Arnprior (15)	6,486	169,415
30	Brighton - Havelock	12,458	128,544
31	Morrisburg - Ottawa	733,863	192,379
32	Gananoque - Hwy. 15	-	37,760
33	Kingston - Stirling	1,197,374	287,030
34	Hwy. 2 (Lancaster)-Hawkesbury	7,146	436,547
35	Hwy. 401 (Newcastle)-Dwight	2,320,681	950,963
35A	Fenelon Falls - Hwy. 35	22	6,456
36	Burleigh Falls - Lindsay	219,968	139,993
37	Belleville - Hwy. 7 (Actinolite)	8,905	92,400
38	Kingston - Hwy. 7 (N. of Sharbot Lake)	1,318,535	130,286
40	Chatham - Sarnia	928,836	162,704
40A	Sarnia By-pass, Hwy. 402 to Hwy. 40	-	11,660
41	Napanee - Pembroke	615,830	373,395
42	Brockville - Westport (29)	231,617	101,066
43	Alexandria - Perth	241,608	302,595
44	Hwy. 17 - Hwy. 29 (Almonte)	-	27,581
45	Cobourg - Norwood	3,619	107,270
46	Hwy. 7 (E. of Manilla)-Coboconk	3,201	84,014
47	Hwy. 48 N. of Hwy. 7 to E. of Hwys. 7 & 12	183,045	132,379
48	Toronto - Hwy. 46 (Bolsover) (12)	425,058	356,704
49	Picton - Hwy. 2 (W. of Deseronto) (2)	935,410	52,326
50	Toronto - Hwy. 9 (N. of Palgrave)	565,852	120,102
51	Rondeau Prov. Park to Jct. Hwy. 3	-	9,095
52	N. of Hwy. 97 S. to Hwy. 2	188,750	64,814
53	Hamilton - Hwy. 2 (Eastwood)	31,596	144,621
54	Cayuga - Cainsville	47,269	112,305
55	Jct. Hwy. 8 to Niagara	54	59,131

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
56	Jct. Hwy. 3 to Jct. Hwys. 53 and 20	79,387	68,372
57	Hwy. 3A - Bismarck	-	2,087
58	Port Colborne - St. Catharines	108,960	242,448
59	Long Point - Hwy. 3 (E. of Tillsonburg)	14,140	276,533
60	Hwy. 17 (W. of Renfrew) - Huntsville	241,304	427,181
61	International Border - Thunder Bay	59,228	85,828
62	Hwy. 14 (N. of Belleville)-Pembroke	111,730	461,133
63	North Bay - Quebec Border	183,298	164,798
64	Sturgeon Falls - Hwy. 11	1,280,975	243,642
65	Quebec Border - Matachewan	462,921	202,523
66	Quebec Boundary to Hwy. 65	1,075,676	240,383
67	Iroquois Falls to Hwy. 101	-	52,655
68	Hwy. 17 (Espanola) to S. Baymouth	518,584	288,805
69	Hwy. 12 (N. of Brechin) - Capreol	398,660	671,783
70	Springmount - Hepworth	-	33,818
71	Fort Frances - Hwy. 17 (E. of Kenora)	2,192,526	201,460
72	Hwy. 17 (Dinorwic) - Sioux Lookout	142,558	79,262
73	Port Bruce - Dorchester	14,266	79,028
74	Hwy. 3 (New Sarum - Nilestown)	3,636	49,204
75	Hwy. 20 (Bismark) - Canborough	18,882	-
76	Hwy. 3 (Eagle) - Hwy. 2	2,601	35,162
77	Leamington - Hwy. 401 (N. of Comber)	14,585	35,482
78	Hwy. 21 (Dresden)-Wallaceburg	396	24,620
79	Hwy. 2 (Bothwell)-Hwy. 7	21,637	107,248
80	Hwy. 2 (S. of Glencoe)-Cortright	20,121	111,046
81	Delaware - Grand Bend	8,715	128,050
82	Hwy. 7 (Thedford)-Hwy. 21	43	16,411
83	Hwy. 23 (Russeldale) to Hwy. 21	1,777	76,977
84	Hensall - St. Joseph	154	215,241
85	Kitchener - Elmira	383,366	42,119
86	Guelph - Amberley	55,751	429,670
87	Harriston - Hwy. 86 (Bluevale)	1,168	85,744
88	Bradford - Hwy. 27 (Bond Head)	155	26,372
89	Hwy. 400 - Hwy. 23 (E. of Palmerston)	563,504	391,538
90	Barrie - Angus	598	61,363
91	Stayner - Duntroon	1,936	33,887
92	Elmvale - Wasaga Beach	1,938	39,169
93	Hwy. 11 (E. of Barrie) - Waverley	489	93,685
94	Callander - Hwy. 17 (S. of North Bay)	901,282	26,488
95	Hornes Point - Wolfe Is.	-	24,550
96	Quebec Head - W. end of Wolfe Is.	3,540	104,777
97	Hwy. 6 (Freelton) - Hickson	24,296	194,707
98	Blenheim - Windsor	15	-
99	Dundas - Hwy. 24 (N. of Brantford)	198,360	70,946
101	Quebec Border - Hwy. 17 (Wawa)	1,170,283	765,401
102	Thunder Bay - Sistonon's Corners	49,941	51,509
103	Port Severn - Hwy. 69	35,435	103,474
104	Hwy. 9-Grand Valley	-	6,970
105	Hwy. 17 - Red Lake	53,359	198,130
106	Hwy. 28 (Dale)-Hwy. 2 (Welcome)	-	11,940
108	Hwy. 17 - Hwy. 639 (Quirke Lake)	2,055	81,932
112	Hwy. 11 - Hwy. 66 (Swastika)	6,170	35,549
115	Newcastle - Peterborough (35)	1,244	103,275
116	Hwy. 72 (Patricia)-Hudson	204,873	21,000
117	Merto N. Lts. - Hwy. 7	6	9,255
118	Dorset - Hwy. 69	950,280	146,831
119	Hwy. 17 (Dryden) - Richan	-	39,379
121	Hwy. 28 - Hwy. 35 (S. of Fenelon Falls)	51,279	248,007
123	Hwy. 11 - North Bay Airport	-	1,280
124	Sundridge to Parry Sound	839,119	180,484
125	Hwy. 105 - Red Lake	-	14,000
126	Hwy. 401 - Hwy. 2 (London)	4,268	26,863
127	Maynooth - Hwy. 60 (E. of Whitney)	150	69,479
128	Kenora - Redditt	672,173	32,562
129	Thessalon - Chapleau	86,974	453,471
130	Port Arthur - Hwy. 61	290,610	36,150

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
132	Renfrew - Hwy. 41	28,155	107,914
133	Hwy. 33 (Millhaven)-Hwy. 401	2,164	20,822
135	Hwy. 401 - Hwy. 2 (London)	-	14,179
136	Hwy. 24 - Orangeville	35	22,650
137	Hwy. 401 - Thousand Island Bridge	11,064	54,681
138	Cornwall - Monkland	67,064	35,539
140	Hwy. 3 (Port Colborne) - Hwy. 20	225,168	-
144	Sudbury - Hwy. 101	2,963,583	523,777
400	Toronto - Hwy. 12 (Coldwater)	12,618,817	855,243
401	(M.C.F.) Quebec Border - Windsor	30,293,501	6,401,275
402	Hwy. 7 Blue Water Bridge	954,307	31,145
403	Burlington - Brantford	2,245,789	410,364
404	Toronto - Hwys. 7 and 12	435,459	-
405	QEW - Int'l Bridge (Queenston)	7,111	82,069
406	Hwys. 20 and 58 - Q.E.W.	631,323	126,996
407	Hwys. 35 and 115 - Hwy. 27	6,071,873	-
410	Hwy. 401 - Hwy. 7 (Brampton)	3,002	-
416	Johnstown - Ottawa	4,257,994	-
417	Quebec Boundary - Ottawa	13,424,722	-
420	Q.E.W. - Rainbow Bridge (Niagara Falls)	2,692	-
427	Q.E.W. - Hwy. 401	1,645,463	-
QEW	Toronto - Fort Erie	11,309,047	2,087,645
TOTAL KINGS HIGHWAYS		<u>\$158,756,952</u>	<u>\$49,159,778</u>

SECONDARY HIGHWAYS

500	Denbigh - Bancroft	\$ 48,559	\$ 163,267
501	Hwy. 103 - Honey Harbour	2,376	39,950
502	Napanee - Marysville	2,955	24,254
503	Tory Hill - Kirkfield	611,847	268,171
504	Hwy. 620 - Apsley	5,362	40,989
505	Hwy. 46 - Uphill	200	49,496
506	Plevna - Hwy. 41	14,013	58,409
507	Hwy. 28 (Lakefield)-Hwy. 503	295,552	108,630
508	Barnstown - Black Donald Mines	421	54,440
509	Hwy. 7 - Snow Road Station	-	47,634
510	Magnetawan - Hwy. 124	-	17,886
511	Brightside - Hwy. 508	14,058	56,355
512	Eganville - Hwy. 60	30,115	97,302
513	Hwy. 132 - East of Hynford	5,164	36,906
514	Hwy. 60 - Interlaken	18	43,041
515	Hwy. 512 - Combermere	55,623	80,513
516	Port Sydney - Windermere	2,510	62,212
517	Twp. Rd. (near New Carlrow) - Hwy. 62	-	39,735
518	Sand Lake - Hwy. 69	137,990	226,820
519	Hwy. 121 - Redstone Lake	78,728	121,948
520	Burk's Falls - Ardbeg	55,263	153,668
522	Hwy. 11 - West of Loring	61,879	130,940
523	Lyell Twp. Line - Hwy. 60	13,426	56,129
524	Hwy. 522 - Hwy. 534 (E. of Restoule)	3,964	11,385
525	Gravenhurst - Muskoka Lake	-	4,602
526	Hwy. 69 - West of Britt	626	9,903
527	Baysville - Huntsville	8,594	56,583
528	Wolseley Bay - Hwy. 64	62,143	30,173
528A	Pine Cove Landing - Hwy. 528	-	11,997
529	Hwy. 69 - Hwy. 69 (Magnetawan River)	1,874	67,597
529A	Hwy. 529 - Bayfield Wharf	-	12,915
530	Hwy. 519 - Hwy. 35 (Carnarvon)	170,941	35,558
531	Bonfield - Hwy. 17	-	9,706
532	Hwy. 11 (S. of Bracebridge) - Hwy. 69	51,968	153,491
533	Mattawa - Hwy. 63	17,664	131,217
534	Powassan - Restoule	14,539	77,223
535	Hwy. 64 - Riviere Veuve	769,752	113,260
536	Hwy. 17 - Creighton	-	11,902

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
537	Hwy. 69 - Hwy. 17 (Wahnapiatae)	96,510	45,841
538	Algoma Mines Loop	-	15,219
539	Hwy. 64 - Warren	73,367	101,920
539A	Hwy. 539 - Tertiary Road 805	-	7,037
540	Little Current - Meldrum Bay	183,102	337,903
540A	Hwy. 540 - Barrie Island	-	7,411
541	Sudbury - Skead /	546,352	50,983
541A	Falconbridge - Hwy. 541	-	6,054
542	Hwy. 68 - Gore Bay	178,607	213,401
542A	Hwy. 542 - Tehkummah	-	5,951
543	Long Lake - Sudbury	66,511	17,844
544	Levack - Hwy. 144	-	5,417
545	Hwy. 541 - Milnet	2,878	52,577
546	Hwy. 17 - Mississauga Provincial Park	88,140	179,812
547	Hwy. 101 - Hawk Jct.	-	11,397
548	Hilton Beach - Hwy. 17	1,337,490	202,321
549	Lake Panache - Hwy. 17	108,230	48,692
550	Sault Ste. Marie - Gross Cap	35,270	19,493
551	Providence Bay - Hwy. 540	38,537	54,833
552	Hwy. 556 - Twp. Road (East of Hwy. 17)	1,367	35,249
552A	Hwy. 552 - Hwy. 17	-	2,999
553	Massey - Richie Falls Camp	4,896	153,875
554	Hwy. 546 - Hwy. 129	9,613	40,464
555	Magog Lake - Hwy. 557	1,874	25,985
556	Hwy. 17 (Heyden) N. easterly	76,612	116,047
557	Blind River	3,779	47,983
558	Haileybury - Montreal River	-	39,572
559	Hwy. 69 (Nobel)-Hwy. 69	-	41,167
560	Hwy. 11 - Hwy. 144 (S. of Gogama)	488,531	411,517
560A	Westree - Hwy. 560	-	15,699
561	Bruce Mines - Hwy. 638	8,525	57,212
562	Hwy. 11 (E. of Thornloe) - Hwy. 65	46,954	20,370
563	Batchawana - Hwy. 17	4,901	10,196
564	Blanche River Bridge - Hwy. 112	-	12,794
565	Pte. Aux P ins - Hwy. 550	-	2,999
566	Matachewan - Ashley Mine	-	33,567
567	E. of Silver Centre - N. Cobolt	-	47,089
568	Hwy. 11 - Kenogami	-	3,036
569	Hwy. 11 - Hwy. 11 (S. of Englehart)	58,887	66,180
570	Sesekiniko - Hwy. 11	-	4,300
571	Hwy. 562 - Earleton	-	8,148
572	Hwy. 11 (Ramore) - Hwy. 101	1,826	25,600
573	Charlton - Hwy. 11	342,397	61,854
574	Cochrane - Norembega	-	56,710
576	Hwy. 101 - Kam - Kotia Mine	3,423	35,080
577	Hwy. 101 - Iroquois Falls	100,804	36,205
578	Iroquois Falls - Hwy. 11	79,932	12,952
579	Cochrane - Gardiner	25,547	55,814
580	Hwy. 11 - Lake Nipigon	-	29,310
581	Hwy. 11 - Remi Lake	-	7,543
582	Hurkett - Hwy. 17	-	9,625
583	Mead - Lac Ste. Therese	140,833	76,934
584	Hardrock Mine - Nakina	327,751	77,409
585	Hwy. 11 - Pine Portage	16,439	69,954
586	Hwy. 11 - Lower Shebandowan Lake	-	6,592
587	Silver Islet - Hwys. 11 and 17	10	92,933
588	Stanley - Round Lake Road	417,139	129,900
589	Hwys. 11A & 17A - Dog Lake Road	625,374	46,584
590	Hwy. 130 - Hwy. 588 (Nolalu)	453,021	62,683
591	Hwy. 589 Northerly	-	12,132
592	Hwy. 11 (Novar) - Hwy. 11	-	31,204
593	Hwy. 61 - Hwy. 588 (Nolalu)	-	108,201
594	Dryden - Hwy. 17	-	40,248
595	Hwy. 597 - Hwy. 590	18,478	77,052
596	Kenora - N. of Minaki	12,425	66,185
597	Pardee - Hwy. 608	58,778	22,066

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
598	Hwy. 604 - Hwy. 128 (N. of Kenora)	34,367	4,675
599	Ignace - Tertiary Road 808	255,547	223,157
600	Hwy. 71 - Rainy River	-	99,598
601	Hwy. 17 - Dryden	506	26,843
602	Fort Francis - Emo	7,735	67,483
603	Hwy. 17 - Dymont	-	5,079
604	Hwy. 17 - Kenora Airport	13,347	12,330
605	Hwy. 17 - Rugby Lake	14,404	19,323
606	Hwy. 17 - Markstay	63,285	3,187
607	Hwy. 69 (Big Wood) - Hwy. 64	-	20,610
607A	French River - Hwy. 607	-	5,455
608	Hwy. 61 - Hwy. 595 (S. Gillies)	3,672	31,515
609	Hwy. 105 - Clay Lake	43,007	20,741
610	Hwy. 67 - Hwy. 101 (Hoyle)	14,966	33,812
611	Hwy. 602 (Sherwood) - northerly	-	23,149
612	Hwy. 103 (Mactier)-Hwy. 69	-	24,346
613	Hwy. 602 - Lake Despair	117,158	45,536
614	Hwy. 17 - Manitouwadge	520,625	109,770
615	Hwy. 17 - Buroitt Lake	1,263	61,474
616	Hwy. 101 - Palomar	-	4,527
617	Hwy. 11 - (Stratton) - Hwy. 600	40,476	29,363
618	Red Lake - Madsen	-	11,878
619	Hwy. 11 (Pinewood) - Hwy. 621	15,674	45,881
620	Hwy. 62 - Hwy. 28 (Apsley)	101,663	74,443
620A	Hwy. 620 - Hwy. 28	7,050	754
621	Hwy. 11 - Lake of the Woods	7,158	108,817
622	Hwy. 11 (Atikokan) Northerly	1,855	10,450
623	Hwy. 11 - Sapawe	2,084	5,298
624	Hwy. 11 - Larder Lake	105,006	79,283
625	Caramat - Hwy. 11	28,758	51,834
626	Matheson - Porquis Jct.	131,602	52,941
627	Heron Bay - Hwy. 17	-	15,596
628	Red Rock - Hwys. 11 and 17	-	10,544
629	Timmins - Timmins Airport	4,424	14,258
630	Kiosk - Hwy. 17	59,002	50,727
631	S. of Hornepayne - Hwy. 11	2,731,030	281,965
632	Hwy. 118 - Rosseau	125	52,293
633	Hwy. 11 - Kawene	2,084	5,887
634	Val Caron - Hwy. 144	3,030	35,687
635	Hwy. 17 - Ottawa River Bridge	-	7,662
636	Hwy. 11 - Frederick House	31,104	7,543
637	Hwy. 69 - Killarney	2,844	213,864
638	Dunns Valley - Echo Bay	244,674	93,314
639	Hwy. 108 - Hwy. 546	1,874	60,790
640	Hwy. 571 - Earlton Airport Entrance	-	7,104
641	Hwy. 17 - Pellatt	8,232	26,118
642	Alcona - Sioux Lookout	19,418	22,205
643	Hwy. 584 - Twp. Road to Cavell	-	21,430
644	Hwy. 69 (Pte. Au Baril) easterly	-	2,472
645	Hwy. 529 - Bing Inlet	-	10,764
646	Pickle Crow - Central Patricia	-	4,235
647	Hwy. 17 - Blue Lake Provincial Park	9,161	36,927
648	Dyno Mine - West Jct. Hwy. 121	54,100	80,221
649	Bobcaygeon - Hwy. 121	5,135	52,262
650	O.N.R. Right-of-Way - Hwy. 112	-	10,637
651	Hwy. 101 - Missanabie	35,593	95,366
652	Wade Lake - Hwy. 574	-	45,044
653	Portage Du Forte Bridge - Hwy. 17	4,985	21,771
654	Hwy. 11 - Nipissing	278,617	38,975
655	Timmins - Ward Kidd Twp. Boundary	6,123	30,327
656	Hwy. 533 northerly	-	4,457
657	Goldpines - Hwy. 105	45,267	23,742
658	Hwy. 17 - Fairbank Provincial Park	67,266	48,058
659	Hwy. 604 - Hwy. 128	-	23,550
660	Bala - Hwy. 103	32,314	49,433
661	Gogama - Hwy. 144	415	7,695
TOTAL SECONDARY HIGHWAYS		<u>\$13,801,259</u>	<u>\$9,374,006</u>

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ANNUAL REPORT

FISCAL YEAR ENDING MARCH 31, 1973



MINISTRY OF TRANSPORTATION AND COMMUNICATIONS



CP-0110T
-R56

ANNUAL REPORT

For the fiscal year ending
March 31, 1973



Ministry of Transportation and Communications



Office of the
Minister

Ministry of
Transportation &
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

December 31, 1973

TO THE HONOURABLE WILLIAM ROSS MACDONALD, P.C., C.D., Q.C., LL.D.
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before you the
Annual Report for the Ministry of Transportation and Communications
for the fiscal year ending March 31, 1973.

Respectfully submitted

A handwritten signature in cursive script that reads "Gordon Carton".

Gordon Carton, Q.C.,
Minister



Office of the
Deputy Minister

Ministry of
Transportation &
Communications

416/248-3604

East Building
Downsview Ontario

December 31, 1973

TO THE HONOURABLE GORDON CARTON, Q.C.

Minister of Transportation and Communications, Ontario

Sir:

I have the honour to present the report of the activities of the Ministry of Transportation and Communications for the fiscal year ending March 31, 1973.

Respectfully submitted


A.T.C. McNab
Deputy Minister

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Organization

The Ontario Ministry of Transportation and Communications, with headquarters at Downsview, administers five Regions embracing 18 Districts throughout the Province.

Like other Ministries of the Ontario government, the Ministry of Transportation and Communications is headed by a Minister of the Crown, who is an elected member of the Ontario Legislature. The Minister is advised on engineering and general policy matters by his Deputy Minister, who has the over-all responsibility for the day-to-day operations of the Ministry.

The Deputy Minister is aided by four Assistant Deputy Ministers — one responsible for Planning, Research and Communications; another for Engineering and Operations; the third for Administration; and the fourth for Drivers and Vehicles.

The Assistant Deputy Ministers are assisted by a group of Executive Directors, to whom the Directors of the various Branches report. Regional Directors report directly to the Deputy Minister.

Deputy Minister's Summary

The past year has been one of continuing development of the Ministry's program to provide Ontario with an integrated and balanced transportation system. While the emphasis was to a large degree on urban transit, the Province's highway system was in no way neglected. Expenditures for construction and maintenance exceeded those of the preceding year and, as predicted, the number of motor vehicles using our roads and highways continued to increase, particularly in and around the Province's large urban areas.

The Ministry's lengthy and comprehensive study of ways and means to develop integrated transportation systems to meet the needs of Ontario's cities was culminated on November 22, 1972, by the announcement of a major new policy related to urban transit known as A New Way to GO/Ontario. The announcement was coupled with a request to the municipalities for co-operation in making the concept a reality.

The program covers a 10-year period and proposed the introduction of innovative transit systems for our major cities and improvement of conventional modes in urban centres throughout the Province. In all, the Government allocated an expenditure of \$135-million a year over the 10 years to update urban transportation.

The New Way to GO/Ontario program provides for: subsidies of 75 percent to municipalities for the purchase of buses, streetcars and trolley buses and related facilities; assistance to municipalities for programs to alter transportation demands at peak periods to spread rush-hour loads in major cities; subsidies of 50 percent to municipalities for the installation of computer-controlled traffic systems and for upgrading and expanding existing systems; continuation and expansion of studies in co-operation with municipalities to maximize the use of existing roadways through such means as one-way streets, delivery and parking areas; intensification of efforts by the Province to co-ordinate transportation planning among municipalities; and the development and demonstration of a new form of intermediate capacity transit system at Provincial Government expense and a subsidy program of 75 percent to assist

municipalities in applying the system to meet their needs.

As the fiscal year drew to a close, Ministry experts were evaluating proposals submitted by developers of intermediate capacity transit systems for construction of a demonstration test project at the Canadian National Exhibition grounds in Toronto. Operational testing of the system selected is expected to begin late in 1975.

Public acceptance of GO Transit, the Government's train-bus commuter system continued to increase and orders were placed for equipment to expand existing services and to provide a new service between Toronto and Georgetown. Passenger volumes for norOntair, the Government's air commuter service in northeastern Ontario, doubled over corresponding months in the preceding year; and at the end of the current year, proposals by Air Canada to integrate and upgrade norOntair and Air Canada services within the region were being discussed.

In the communications field, the Ministry concentrated on development of an Ontario telecommunications policy, expanded contacts with the federal and other provincial governments, and directed the Government of Ontario interventions before the Telecommunications Committee of the Canadian Transport Commission.

Motorists in Ontario continue to take to the highways at an ever-increasing rate. More than 3.5 million of them, driving 3,379,034 vehicles, travelled an estimated 35 billion miles in the Province during the year — an increase of 11 percent over the preceding year. The number of vehicles registered was up 5.3 percent, compared to an increase of about 4.5 percent for 1972.

The number of motor vehicles using our highways is increasing by more than 100,000 a year. If this rate of increase continues, the total will be well above the four million mark by the end of 1980.

The fact that the majority of the motor vehicle population is centered in and around the Province's major urban areas adds further to the need for general

transportation planning, and particularly to the need for municipalities to modernize, expand and integrate their own transit resources — an objective which has been a major concern of the Ministry over the past two years.

Of the Ministry's total gross expenditures of \$597,581,625 for the fiscal year 1972-73, subsidies to municipalities amounted to \$232,308,838, bringing total subsidies paid to municipalities over the past six years to well above the billion dollar mark.

Following is a summary of expenditures reported by

the Financial Comptroller for fiscal 1972-73, with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	March 31, 1972	March 31, 1973
Ministry Administration	\$ 17,635,648	\$ 18,056,882
Maintenance	88,043,059	89,079,376
Construction	230,181,180	232,744,364
Municipal Subsidies	235,074,412	232,308,838
Public Operations	5,311,720	6,552,851
Vehicles and Drivers	11,013,202	11,825,910
Common Carriers	2,612,449	2,854,470
Ontario Seasonal Employment	7,215,328	4,158,934
TOTAL GROSS EXPENDITURE	\$597,086,998	\$597,581,625

Planning, Research and Communications

POLICY DEVELOPMENT DIVISION

The Policy Development Division is responsible for developing transportation and communication policies for Ontario. It acts also as liaison with other jurisdictional and government agencies in the fields of transportation and communications.

Communications Branch

Acting on the instructions of the Speech from the Throne of the previous year, the Communications Branch concentrated on three areas:

- development of an Ontario telecommunications policy;
- expanding contacts with the federal and other provincial governments; and
- directing the Government of Ontario interventions before the Telecommunications Committee of the Canadian Transport Commission.

The Branch, which had devoted much of its first year to recruitment of a "task force" to examine possible policy options, moved forward during 1972-73 with preliminary options for government consideration.

The Communications Branch engaged in a wide variety of intergovernmental meetings leading up to the first conference of provincial communications ministers, held in Quebec City, November 20-21, 1972. The establishment of the Ontario-Quebec Communications Committee, a sub-committee of the Ontario-Quebec Permanent Commission, brought the Branch into a close and constructive relationship with the Quebec Department of Communications. A positive and fruitful relationship at both the ministerial and staff levels was also developed with the federal Department of Communications.

During the autumn of 1972, the Branch directed the Government's intervention into an application for rate increases by CN-CP Telecommunications. In February-March, 1973, it undertook the intervention into the application by Bell Canada for what was known as its "A" rate case.

Ontario Telephone Service Commission

This Commission is responsible for administration of The Telephone Act, an Act regulating the operations of Independent Telephone Systems created under Statutes of Ontario.

As of January 1, 1973, there were 40 Independent Telephone Systems operating in Ontario with approximately 205,500 phones and an estimated total capital expenditure of almost \$87 million. Telephone service in the Province is provided by the Independents; by Bell Canada, with more than four million phones; and by the Ontario Northland Communications System, which operates long distance lines in Northern Ontario and provides local service to a few customers.

Economics Office

The Economics Office is composed of the following sections: Area and Urban Studies, Modal Studies, and Transportation Pricing Studies. The Office reports directly to the Assistant Deputy Minister of Planning, Research and Development. The major responsibilities include the provision of economic analysis for all parts of the Ministry, the development of strategy studies for the Ministry and the study of freight rates and their impact on economic development in Ontario.

In the past year the Office was responsible for providing the analysis which led to the formation of the Ontario Transit Development Corporation; it engaged in the consolidation of Northern Air Carriers for the operation of third-level air services; it reviewed the Ministry's road standards to assess possible cost reduction programs; it prepared a parking policy paper for the Ministry and it completed a review of Northern Ontario transport problems with particular emphasis on freight rate anomalies. In addition, a barging study was prepared to point out to shippers some new developments in barging techniques which should revitalize interest in using barges on the Great Lakes.

Aviation Services Office

This Office reports directly to the Assistant Deputy Minister, Planning, Research and Development.

Air services were inaugurated in October 1971, as a three-year demonstration to provide a high standard of air service connecting Sudbury, Sault Ste. Marie, Timmins and Earleton. In June, 1972, service between Earleton and Timmins was terminated (lack of demand) and service frequency between Earleton and Sudbury was increased to allow connections with Air Canada to Toronto. Connections between northeastern and northwestern Ontario via Transair at Sault Ste. Marie were also established.

In the fall of 1972 a proposal was made to Ontario by Air Canada to integrate and upgrade norOntair and Air Canada networks to and within northeastern Ontario. The proposal included improved jet services by Air Canada to North Bay, Sudbury, Timmins and Sault Ste. Marie and improved local services by norOntair between Timmins and Sudbury and new services to North Bay and Kirkland Lake. As a prerequisite to route transfers from Air Canada to norOntair, the Government declared its intention to support norOntair beyond the three-year experimental period and supported application to the C.T.C. for transfer of the subject Air Canada routes to norOntair.

In the spring of 1973, a Provincial Air Service System Study was completed. Its scope was to examine and propose recommendations on how deficiencies in the public air transport system in Ontario could be improved. Its recommendations could improve the economic, cultural and social base of as many as 34 communities throughout the Province.

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division consists of two Branches — the Engineering Research and Development Branch and the Systems Research and Development Branch.

Systems Research and Development Branch

This Branch is responsible for research and development programs in new transportation technology, traffic surveillance and control, public safety, and human, environmental and social factors as they relate to transportation and communications facilities.

During the past year, the Intermediate Capacity Transit System (ICTS) Demonstration Project has been the most demanding undertaking in the Systems Branch. Highlights of the ICTS were: (a) evaluation of eight Phase I submissions for a Transit Demonstration System (TDS); (b) preparation of Phase II specifications; (c) application studies for ICTS to determine their scope of application and desirable characteristics; (d) computer simulations of system performance; (e) development of reliability standards, operational concepts and public safety features; (f) evaluation of the Phase II submissions which is now under way and which will result in the selection of the system best suited to our needs and our climate.

Other projects carried out in the Systems Research and Development Branch included a staggered hours concepts review for modifying the peak demand for transit and road facilities. In this connection, a proposal for a major demonstration of the staggered hours concept is being developed for application to the Ontario Government complex at Queen's Park.

Also on the transit theme, a social survey technique using stratified group discussion meetings was tested in Metropolitan Toronto to identify variables influencing community transportation needs and attitudes toward various forms of urban transport.

A pilot study was carried out in the Sudbury District to develop techniques for a major study of the public benefits which would accrue to subsidy programs for worker-commuter transit bus systems.

In telecommunications, a program of interviewing a representative sample of Ontario residents was initiated to provide the opportunity for citizen contribution to a provincial telecommunication policy.

To gather driver and travel data, a skills improvement booklet called 'Driving' was sent to a random sample of Ontario drivers who had accumulated nine demerit points for the first time. Questionnaires were sent to beginner drivers throughout Ontario and the information collected will be related to their subsequent driving records. Also, data on environmental conditions is being collected and related to winter collisions. In order to determine the amount of driving done by Ontario drivers, 8,000 questionnaires were sent out with licence renewals.

Follow-up research and further data analysis was made on an experimental program of educating school children in the use of seat belts. Results of the research report will be published, in keeping with the Ministry's policy of publishing research material generated from within the Research and Development Division.

Engineering Research and Development Branch

This Branch is responsible for physical research and development programs in pavements, structures, materials and quality assurance, vehicles, physical safety and operations, and the environment. These programs are aimed at improving transportation facilities and making them safer and more economical to plan, design, construct and maintain.

As the necessary facilities and expertise can be developed, we are widening our scope toward the solving of problems arising from the regulation of vehicles on the highways, the introduction of new modes of transportation, and toward the expansion of safety and environment-oriented research. Plans were underway towards the end of the year for examination of many safety-linked aspects of commercial vehicle design and operation.

In the traditional areas of highway pavement structures and material research, development of the means of measuring, recording and analyzing the performance of all types of pavements is leading to a system of pavement management in which the design, construction and maintenance are integral parts of selecting and programming the appropriate type of pavement for particular locations and traffic conditions. Conclusions from a 15-year study of an experimental composite pavement have demonstrated the potential long-term advantages of this type of construction for future use.

Another long-term study completed was that on the reactivity of certain dolomitic limestone aggregates with alkalies in Portland cement. It was found that the countermeasures taken had effectively prevented deterioration of concrete in both pavements and bridges.

During the year, 35 bridges were studied to determine

their load-carrying capacity and to develop new standards for design. Studies of the vibration of bridges' superstructures under impact of heavy traffic were also conducted with the use of the Ministry's 200,000-pound load-testing vehicle. Other completed studies were concerned with problems of cracking in prestressed voided concrete bridge decks and the fatigue of welded steel girders.

The monitoring of pavement skid resistance and the development of more skid-resistant surface textures and new test methods to determine their effectiveness have continued. An important finding from a study of accidents during the winters before and after the prohibition of the use of studded tires was that the proportion of accidents on icy and snow-packed roads declined following the ban.

Another aspect of winter driving investigated was snow drifting. Drifting snow can be simulated by models of various highway configurations in a hydraulic flume. From such studies, better positioning of snow fences along existing highways and design improvements of new highways can be determined.

Toward the end of the year, planning began for the work required to develop future optimum designs for elevated, concrete guideways for the Intermediate Capacity Transit System.

PLANNING DIVISION

The function of the Planning Division is to prepare short and long term plans for regional and urban areas of Ontario and provide leadership and guidance to municipalities on transportation matters. These responsibilities are divided into two Branches: Systems Planning, and Environmental and Operational Planning.

Systems Planning Branch

During the 1972-73 fiscal year the principal activities of this Branch were carried out by four Offices: Area Transportation Systems, Municipal Planning, Systems Priority Development, and Systems Planning.

The Area Transportation Systems Office is divided into two Sections:

The Regional Planning Studies Section investigates specific areas in Ontario. Reports on four areas were released and eight others were in progress. A separate group reviews the recommendations of all the area highway studies.

The Provincial Systems Planning Section studies public transportation services. Initial examinations for bus, rail and goods movements were completed. Work on the air mode included expansion plans for norOntair and studies for local/feeder services for all of Ontario. Airport access studies were under way for Malton and the proposed Pickering site.

Municipal Planning Office

This new office in the Ministry combines the functions of the former Urban Transportation Planning and the Municipal Management Systems Offices.

Planning studies of municipal transportation systems are administered by this Office. This includes both financial and technical assistance for developing future transportation system plans; reviewing changes in jurisdiction and function of transportation facilities; studying roads needs, and programming improvements; and recommending funding levels for municipal roads systems.

Financial assistance to the Metropolitan Toronto Transportation Plan Review Study forms part of this program. Other important projects were started this year in the Regional Municipalities of Sudbury and Waterloo to establish new regional roads systems.

Systems Priority Development Office

This Office studies the needs and priorities for transportation system improvements.

A study was undertaken to develop a method based on transportation economies and systems analyses to evaluate the optimum priority for improvements. This method, initiated for provincial highways, will also be applicable to municipal roads and other public transit modes. By the end of the year the initial phases of implementation were under way.

Other activities included studies of highway needs, urban road needs and an overall summary of

provincial road needs. The road needs data provided a first assessment of system priorities and resource allocation.

Systems Planning Services Office

The major function of this Office is to obtain, process and maintain in readily accessible inventories the large variety of information required by the other Branch offices. These services result from the work of four Sections: the Project Studies Section collects and converts raw data into the most suitable form for planning purposes. This includes detailed information on Land Usage, Traffic Characteristics and Specific Projects. Two major undertakings for which data was supplied were the Toronto Area Regional Model Study (TARMS) and the Niagara-Lake Erie Transportation Study.

The other Sections providing supporting services to the Branch offices are Graphical Design, Computer Liaison, and the Data Bank.

Environmental and Operational Planning Branch

This Branch develops comprehensive planning of transportation corridors for all modes in the total transportation system within the Province, working from the broader planning framework developed by the Systems Planning Branch. This phase in the planning process studies the feasibility of various alternative transportation links, giving full consideration to the social, economic and environmental impacts of each alternative on the area, in addition to engineering and cost considerations.

The past year has seen the successful completion by the Environmental and Feasibility Studies Office of a number of planning studies in which transportation decisions have been evolved in full consideration of environmental factors using a multi-discipline team concept, and with the assistance of public involvement through public meetings, citizens' advisory groups, and "drop-in" information centres. Progress has also been made in the development of guidelines for the evaluation of environmental impacts for general use within the Ministry, a work highlighted by publication of the report "Public Participation in Transportation Planning".

The Operational Planning Office has been involved in short-term planning activities grouped into a number of programs which include:

- Airfield Development in the remote and near North;
- Air Services Planning, including norOntair and Air Canada integration;
- Provincial Transit Systems, including development of the Metropolitan Toronto Dial-a-Bus system;
- Municipal Transit Subsidies, both capital and operating;
- Municipal Studies, encompassing transit utilization, traffic and parking projects;
- New Mode Operational Planning, with emphasis on the intermediate capacity rapid transit system; and
- Special Projects, such as access to Bronte Creek Provincial Park and transportation requirements for Metro Centre.

The Operational Planning Services Office provides support services to the Branch. It reviews all land use proposals affecting the Ministry and maintains liaison with other Ministries and agencies. This Office has also carried out numerous Special Studies of a priority nature.

General Aviation

The General Aviation Office also comes under the Planning Division, and a good deal of effort was expended by this Office during the year in a re-examination of the goals of the airport program, the policies that should apply, and the methods of implementing and administering the program. The significant decisions made were that the program should continue using similar guidelines to those

employed initially, and that it should be concentrated in northern Ontario, but that the subsidy limit should be raised from 50 percent to 80 percent.

Major progress was made in completing an airport system connecting isolated Indian settlements along the Hudson Bay/James Bay coastal area. An airport begun at Fort Albany the previous year was completed and made operational, making possible for the first time uninterrupted all-season transportation between this settlement and the south. Approvals were obtained to construct new airports at Attawapiskat and Fort Severn. Construction equipment, materials and supplies were purchased and delivered to the sites so that the work could be performed by day labour during the summer of 1973. Delivery, because there are no conventional road or rail systems into these locations, was by sleds pulled by crawler tractor over temporary winter roads.

The airport at Moosonee, which is the southern terminal of the Hudson Bay/James Bay airport system, was improved by extending the main runway and by constructing a second runway. Neither of these projects were fully completed before winter.

All airports constructed under this program at isolated settlements are operated by the Ministry. During 1972/73, airports at Winisk, Sandy Lake and Big Trout Lake fell into this category. Operation of those at Attawapiskat and Fort Severn will begin as soon as construction is completed.

During the year a number of small subsidies were approved for municipal airport improvements, but no heavy expenditure projects were proposed. Typical of projects in this category were application of an asphalt surface treatment at the Minaki Airport and completion of terminal area development at Fort Frances.

Engineering and Operations

DESIGN DIVISION

The Design Division is responsible for policy and procedures covering the design and traffic operations of all Ministry transportation projects. It consists of two Branches: Design Services and Systems Design; and a Traffic Control Office.

Design Services Branch

This Branch has seven Offices which provide a variety of design services to the Ministry.

The Engineering Surveys Office provides policy and procedural guidance for Regional use and establishes precise horizontal and vertical control points. During 1972-73, 478 bench marks and 1,175 monuments were set and measurements were taken at 11 bridge sites.

The Foundations Office provides geotechnical data for structural designs and advice on geotechnical problems. During the year, 137 investigations were made, including one at the C.N.E. site for the ICTS test. A Geotechnical Cross Reference and Retrieval System (GEOCRES) was completed and made available to the public.

The Hydrology Office conducts investigations for bridge design and provides advice on hydrological problems. During the year 81 reports were made and work undertaken on classifying soil types for watershed analysis.

The Photogrammetry Office updated the Official Road Map, revised 30 other maps and made a special map of Northern Ontario. Other work performed included 107 photo mosaics, 199 photographic bases, 50 photo interpretations covering 440,000 acres and 147 plans covering 473,000 acres. A computer controlled automatic draughting machine came on line, resulting in the most automated production draughting system in the world.

The Program Office initiated 470 new projects, managed the award of 154 contracts and monitored expenditures on 52 projects.

During the year the Soils Office reviewed 167 soils design reports and 18 pavement selection reports, monitored two sites for testing a new pavement skirt design, made 13 seismic investigations and carried out 45 air photo gravel searches covering 5,500 square miles.

The Structural Office designed and prepared for contract 63 bridges and 47 other structures, reviewed 153 preliminary plans and final plans for 150 municipal bridges, 198 culverts and 122 plans for maintenance buildings, retaining walls, bridge and culvert repairs and prefabricators shop drawings. Two hundred and seventy bridges were inspected and 116 load restricting by-laws passed for approval.

Systems Design Branch

This Branch, consisting of the Systems Design Office and the Systems Technology Development Office, is responsible for the development, implementation and updating of design policies, methods and procedures to be used in the design of transportation projects throughout the Province.

Within the Systems Design Office, the Geometric Design Section ensures that all geometric aspects of a project satisfy safety and operational criteria. The Project Review Section reviewed 188 projects for accuracy and conformity to current policy. The Drainage Section is responsible for establishing and implementing policy on surface and storm sewer design. The Illumination Section was involved in 149 projects during the year, of which 70 were completed.

The Systems Technology Development Office is responsible for the development of design technology to improve safety, aesthetic and economic quality of design. To carry out these functions, the Office is divided into the following Sections: Automatic Data Processing, Environmental Design, Standards, and Technical Development.

The co-ordination of the design of a new ferry service between Tobermory and South Baymouth was administrated by the Systems Design Branch. This

involved the design of a 3,300-ton car-passenger ferry, 366 feet long, 62 feet wide with the capability of carrying 113 automobiles with sufficient clearances to carry trucks and buses and 530 passengers. The contract for the ship was advertised and awarded. The planning and design of the wharves, channel improvements, parking lots and terminal buildings were completed and contract documents prepared for advertising.

Traffic Control Office

The Traffic Control Office studied traffic operational safety on the highway system during the year, the effectiveness of The Highway Traffic Act in this regard, and provided recommendations for policy decisions.

Areas of major concern included traffic operation analysis leading to a reduction of roadside hazards and the restriction of trucks from the left lanes of multi-lane freeways.

This Office continued to advise the five regional traffic sections on related matters, including intersection studies, speed zoning, sign layouts, signal and illumination studies and provided traffic engineering assistance to municipalities.

The Traffic Operation Studies Program was expanded during the year and studies now eligible for the 75 percent contribution by the Ministry include the computerization of traffic signals. The new 50 percent subsidy for the installation of traffic signals by municipalities has also increased the activity of this Office.

The Traffic Control Development Section conducted a number of studies on the effectiveness of new traffic devices and continued development studies for a freeway traffic surveillance and control system.

OPERATIONS DIVISION

The Operations Division consists of three Branches: the Construction Branch, the Maintenance Branch and the Municipal Branch. The Division covers the entire Province through 18 operating Districts.

The number of contracts awarded during the fiscal year totalled 301. There were 161 for construction and 140 for maintenance.

Construction Branch

This Branch is responsible for the construction program of the entire Province, producing and revising contracts and general specifications, direction of the Operations Branch Technical Training Program, control of construction personnel, and the revising of manuals pertaining to construction.

Highlighting the year's construction program was work on the Macdonald-Cartier Freeway, the Queen Elizabeth Way, Highway 400, Highway 402, Highways 416 and 417, Highway 144, the St. Joseph Island Bridge and Resources Roads in Northern Ontario.

Following are some of the many projects undertaken:

Southwestern Region

Chatham, London, Stratford and Owen Sound Districts

First phase of the E.C. Row Expressway, including Dougall Avenue and Howard Avenue, overpass bridges, and Penn Central Overhead bridges is nearing completion and was opened to traffic July 17, 1973, from 0.4 miles west of Highway 3B to east of Howard Avenue. Reconstruction of 5.6 miles of Highway 40 between Highway 401 and Blenheim was completed. Highway 24 was reconstructed from Highway 59 easterly for a distance of 6.83 miles.

The first stage of the Hanlon Expressway, City of Guelph, was opened to traffic.

Reconstruction of Highway 400 from a basic four lanes to six lanes, with the addition of a full interchange at Duckworth Street, Barrie, was completed.

Central Region

Toronto, Hamilton and Port Hope Districts

The East Main Street tunnel in Welland under the relocated Welland Canal was opened to traffic.

Highway 140 is now opened from Highway 3 in Port Colborne to East Main Street in Welland.

A contract was awarded for the reconstruction of the Macdonald-Cartier Freeway from Markham Road to Meadowvale Road.

A contract was also awarded for the reconstruction of the QEW from Royal York Road to the Humber River. Various contracts were awarded for the reconstruction of Highway 27 from Rexdale Blvd. to Highway 7; Highway 7 at Norval; and Highway 27 from Kleinburg to Schomberg.

Eastern Region

Kingston, Ottawa and Bancroft Districts

Two contracts were completed on Highway 416 and approximately 12.7 miles of highway on new alignment was opened to traffic. Highway 34 grading, drainage, granular base and hot-mix paving was completed from Kennedy's Corners westerly for 2.8 miles. Reconstruction of Highway 60 from Barry's Bay westerly for 8.9 miles was also completed. All contracts for grading over the 65 miles of Highway 417 between Ramsayville and the Quebec boundary have been awarded and paving contracts covering 35 miles are in progress. Construction on this new freeway is on schedule for opening in 1974.

Northern Region

Huntsville, Sudbury, North Bay and New Liskeard Districts

On Highway 11, grading, drainage, granular base and hot-mix paving and a structure were completed from the north junction of the Gravenhurst Bypass northerly for 4.6 miles. Highway 35 grading and two structures were completed from one mile south of Carnarvon northerly for 6.1 miles. On Highway 63, grading and updating guide rail were completed from 14.6 miles north of old North Bay city limits northerly for 9.5 miles. Highway 101 grading, drainage, granular base and hot-mix paving from the Pamour Mine entrance easterly for 13.6 miles was completed. Highway 17 was completed to four lanes from Power Street in Copper Cliff to the junction of Highway 17 and 536, a distance of 4.9 miles. Five truck climbing lanes were also constructed on Highway 17.

Northwestern Region

Cochrane, Sault Ste. Marie, Thunder Bay and Kenora Districts

Work on Highway 631 from 12.4 miles north of Highway 17 at White River northerly for 12 miles was completed. Highway 631 from White River to Hornepayne was opened to traffic. On Highway 11, grading, drainage, granular base and hot-mix paving from 19.9 miles north of Highway 17 northerly for 10.73 miles was completed. On Highway 17, hot-mix paving was also completed from the Ontario-Manitoba provincial boundary easterly for 18.46 miles and a new "Welcome to Ontario" sign and a picnic park site were constructed.

SUMMARY OF HIGHWAY MILEAGES IN ONTARIO
AS OF MARCH 31, 1973

	CONCRETE	HIGH CLASS BITUMINOUS	LOW CLASS BITUMINOUS	GRAVEL	TOTAL
King's	369.7	8,348.0	763.5	292.4	9,773.6
Secondary	—	237.5	761.1	1,919.6	2,918.2
Tertiary	—	24.4	—	193.1	217.5
Total	369.7	8,609.9	1,524.6	2,405.1	12,909.3

Materials and Testing Office

The principal functions of this Office are: to provide technical guidance and training in the selection and use of materials and products; to perform the testing and inspection necessary for quality assurance; to prepare and revise specifications; and to undertake investigational and development projects.

The Office provides information to other Branches and Sections concerned with planning, design, construction and maintenance of transportation systems. Highlights of work of a non-routine nature undertaken during the year included:

Paved Shoulder Heaving — Asphalt shoulders adjacent to concrete pavements sometimes heave. A study was initiated to determine the extent and cause of heaving and a trial section of joint sealing was carried out to determine the best method of cutting and sealing the joint.

V-Bottom Hopper Trailers — These trailers were evaluated with respect to placement of granular materials and a Special Provision, permitting their use, was prepared.

Bridge Deck Voltmeter Surveys — A survey was carried out on a number of structures using the half-cell voltmeter technique. The resistance is a measure of the corrosion of the reinforcing steel, and it was found that this method has good potential.

Concrete Pavement Repairs — Assistance was provided with the development of precast slabs used in repairing broken concrete pavements. This technique permits rapid repairs and cuts to the minimum the time a lane is closed to traffic.

Asphalt Density Determinations — Two nuclear road loggers were retained to provide a profile of densities on a number of paving projects. These units assisted the construction staff with their quality assurance program.

Asphalt Stabilized Bases — Stabilizing sand with a penetration grade asphalt cement was tried successfully on two contracts in Southwestern Ontario. This technique has good application where crushable granular materials are scarce.

Sulphur Asphalt — Sulphur is reported to impart special properties to an asphalt mix. A test section was laid at Tillsonburg and is now under observation.

Licence Plate Validation Stickers — Evaluation of licence plate validation stickers was initiated.

Vehicle Markings — Specifications for materials used for vehicle markings were revised and prepared for the Equipment Section.

Safety Cones — A laboratory evaluation for colour stability and cold-impact resistance on a new type of traffic cone resulted in its adoption for Ministry use.

Asphalt Emulsions — An extensive laboratory evaluation was carried out on a newly-developed emulsion, HF 225, which has good coating characteristics with dirty aggregates.

Bridge Deck Expansion Joints — Six proprietary expansion joints were evaluated in the laboratory with the view to using them in the field and observing their performance.

Maintenance Branch

This Branch directs and controls all summer and winter maintenance carried out by the Districts on all the King's and Secondary Highways throughout the Province.

Roads snowplowed during the winter months totalled 14,365 miles. Salt used for de-icing roads totalled 336,959 tons and sand used for winter maintenance, 745,422 tons.

Some 96,485 trees and shrubs were planted in 16 Districts. Herbicide applications for weed and brush control covered 14,489 miles along highway rights-of-way. All 18 Districts were active in grass seeding operations covering 4,224 acres. Tree removal operations accounted for 12,173 trees by M.T.C. forces, 1,789 through maintenance contracts, and 283 resulted from requests by utility companies.

The Structural Maintenance Section inspected 1,100 bridges on King's and Secondary Highways and made recommendations to District Engineers for repairs and load restrictions where necessary. Contracts were awarded for cleaning and painting nine steel structures and 10,000 lineal feet of bridge handrails. District forces completed the painting of two bridges and 5,000 lineal feet of bridge handrail. Six existing Bailey bridges were renovated to support heavier loading; five Bailey bridges were erected to last for at least 10 years; and 21 were erected as temporary detours. Recommendations were made to Districts for waterproofing bridge decks and for installation of special deck expansion joints to produce a smoother travelling surface and to avoid continual repairs.

The Electrical Section of the Maintenance Branch was involved in the design, and District electrical crews in the installation of 1,268 lighting fixtures at 306 locations, traffic signals at 79 locations, flashing beacons at 53 locations and signal lighting at 39 locations.

The Ministry entered into an agreement with the Electrical Utilities Safety Association of Ontario to provide for special training and establish standard work procedures for our Head Office and District Electrical Section.

Mulch pavement mixed and laid by Ministry forces totalled 34 miles in five Districts.

Twenty-two zone stripers, 20 dual and two single machines, zone striped 12,385 miles of King's and Secondary Highways and painted 7,348 miles of edge line. This year the Ministry adopted the new Canadian Standard of pavement marking which calls for yellow lines separating opposing lanes of traffic, and white separating traffic moving in the same direction, and for edge lines.

	ROAD MILEAGE	APPROVED EXPENDITURE	SUBSIDY
Metro Toronto			
Roads	380.8	40,753,276	21,761,638
Subway	—	34,923,318	17,542,210
Counties*	12,336.2	82,314,227	45,876,823
Townships**	51,073.8	98,575,791	54,208,653
Urban	14,596.9	143,475,383	64,436,752
Grand Total	78,387.7	\$400,041,995	\$203,826,076***

* Includes Suburban Commissions and Regional Municipalities

** Includes Boroughs, Improvement Districts and Indian Reserves

*** Includes subsidies paid to 44 Municipalities for Public Transportation expenditures in the amount of \$12,445,411.

Ferry Services

Two ferries operated by the Ministry between Kingston and Wolfe Island compiled a total of 8,289 trips during the year and carried a total of 178,717 motor vehicles. Another two ferries operating between Glenora and Adolphustown logged a total of 23,177 trips and carried a total of 221,290 motor vehicles.

A single ferry operating between the mainland and St. Joseph Island made a total of 32,026 crossings and carried 208,694 motor vehicles. This ferry was taken out of service on December 11, 1972, with the opening of the St. Joseph Island Bridge.

	CONSTRUCTION	MAINTENANCE	TOTAL
Roads	46,763,714	17,451,477	64,215,191
Bridges and Culverts	6,369,677	764,243	7,133,920
Winter Control	—	10,965,116	10,965,116
Total Approved Expenditures	\$53,133,391	\$29,180,836	\$82,314,227

COUNTY ROADS

The 1972 expenditures on County, Suburban Road Commissions and Regional Municipalities were as follows:

MAINTENANCE

OPERATION	MILES MAINTAINED	AVERAGE COST PER MILE
1. Roadside	11,485	\$ 259.00
2. Hard Top	8,912	693.00
3. Loose Top	2,573	1,400.00
4. Winter Control	11,485	877.00
5. Safety Devices	11,485	171.00
6. Bridges and Culverts	11,162	69.00

Signs and Building Permits

Building Permits issued during the year by the Signs and Building Permits Section totalled 6,419, with a valuation of \$269,056,627; and permits for Field Advertising Signs totalled 6,197, with a valuation of \$59,161. Other permits issued included 2,839 Entrance Permits and 1,307 Encroachment Permits; and 2,221 Sign Permits were issued and 5,471 were renewed.

Municipal Branch

The 1972 subsidizable expenditures by the municipalities increased by approximately \$18,208,000 over 1971, and by \$248,355,400 over 1962.

Subsidies Section

During the year under review, 902 municipalities and 45 Indian Reserves received subsidies under The Public Transportation and Highway Improvement Act for expenditures in 1972. Aggregate amounts were:

Some understanding of the magnitude of the work represented by these figures can be gained from the following summary of the work performed:

1. ROADS

411.01 miles completed at a total average cost of \$74,846 per mile.

2. BRIDGES AND CULVERTS

(a) Bridges (20 ft. span and over)

30 bridges completed at a total average cost of \$29.36 per square foot of deck area.

(b) Structures (under 20 ft. span)

Total number completed 46

(c) Pipe Culverts installed. 2,910

Plans Approvals

Municipalities continued to submit pre-engineering data for road and structure construction projects

during the year. About 2,000 Design Criteria data sheets were received by the Ministry detailing the proposed geometric standards, estimated costs and type of road improvement desired. The data involved 1,728 miles of construction and required some inspection on the work sites to determine the design features best suited to local conditions. Preliminary drawings, contract plans and tendering documents for 600 projects were also reviewed.

Urban Planning Section

This Section represents the Ministry in the planning, design and implementation of Connecting Link projects undertaken by urban municipalities and subsidized by the Ministry. The Ministry's contribution to this work was about \$9 million.

Drivers and Vehicles

Drivers and Vehicles deals with all aspects of regulation and control for drivers and vehicles in the Province.

Between 1962 and the end of 1972, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle collisions were all on the rise. During those years, traffic deaths increased from 1,383 to 1,934 and the population grew from 6.4 million to 7.9 million. The fatality rate per 100,000 did not show any identifiable trend, however, varying from a low of 20.1 in 1970 to a high of 24.2 in 1972.

In contrast to the fatality rate, the number of people injured increased steadily, most noticeably in 1971 when it went to a high of 108.5 per 100,000 population, compared to a low of 65.8 in 1962.

In 1972, the number of motor vehicle traffic collisions reported totalled 189,494, an increase of 19.3 percent over 1971; the number of people injured fatally increased by 9.3 percent; and the number of personal injuries increased by 12.4 percent.

The number of miles driven in 1972 was estimated at 34,864,557,000, an increase of 11 percent over the 1971 figure.

Driver Branch

The Driver Branch is responsible for the examination, licensing and control of drivers. The chief functions of the Branch include operation of 160 driver-testing facilities throughout the Province, administration of the Demerit Point System, maintenance of all driver records on the computer system, licence suspensions and reinstatement of driving privileges.

In 1972, Ontario's driver population increased by 125,344 or 3.5 percent over 1971, for a total of 3,688,541 licensed drivers. Of this total, 1,374,159 or 37.4 percent were female.

During the year, driver road tests were given to 284,048 persons applying for original licences and being examined for various reasons. The failure rate on the first try was 28.2 percent.

Nearly one million certificates of conviction for traffic violations were recorded. On the basis of these records, 59,233 suspensions of driver licences were applied, compared to 46,614 the previous year. Of these, 1,552 were suspended under the discretionary authority of Section 27 of The Highway Traffic Act after the individual in each case was afforded the

opportunity of a hearing. Most of the suspensions were for medical reasons.

Under the Demerit Point System 97,634 warning letters were issued to drivers at six to eight points; 23,597 drivers were interviewed and re-examined at nine to 14 points. Of the total of 7,688 point system suspensions, 4,976 were at 15 points; 2,163 for failing to attend interviews; and 549 for failing to show cause why their licences should not be suspended.

Vehicle Branch

The Vehicle Branch administers The Public Commercial Vehicle Act, The Public Vehicle Act, The Motor Vehicle Transportation Act Canada, The Motorized Snow Vehicle Act and those sections of The Highway Traffic Act which relate to licensing, inspection and regulation of vehicles. The Branch is composed of the following Sections:

Oversize-Overweight Permit Section, which issued 26,600 permits for the movement of over-dimensional or overweight loads and vehicles after careful examination of the public interest.

Highway Carrier Section, which not only has the responsibility of the licensing and regulation of "for hire" trucks and buses, but has a further responsibility to enforce the provincial weight laws in order to provide protection for highway users and for the highway system itself. A staff of 277 throughout Ontario operates 45 weigh scale locations, 65 patrol vehicles and 12 portable scale units. The Section reports that its enforcement activities in 1972 resulted in 11,714 convictions, of which 3,105 were related to infractions in respect of the weight of loads and vehicles.

Vehicle Licence Section, which is responsible for the registration of all motor vehicles, trailers and motorized snow vehicles required to be registered. Service is provided by 284 appointed licence issuing agents across the Province. In addition, six Ministry offices provide this service at Ottawa, Hamilton, Mississauga, Stratford, Oshawa and Queen's Park, Toronto.

Motor Vehicle Registrations — 1972

Passenger	2,611,998
Truck and Tractor	465,477
Bus	14,305
Dual Purpose	236,937
Trailer	420,682
Motorcycle	57,727
Transfer of Ownership	1,407,393
Motorized Snow Vehicle	
(November 1, 1972 to May 31, 1973)	199,399

The Vehicle Inspection Section administers Section 58 of The Act, which provides that a certificate of mechanical fitness be filed on application for the transfer of the registration of a motor vehicle. In 1972, 407,375 certificates of mechanical fitness were submitted to the Ministry as evidence of compliance with the prescribed motor vehicle safety standards. The number of inspections for certificates of mechanical fitness plus safety-lane inspections brought the total of inspections close to the million mark, approximately 30 percent of Ontario's used car population.

Safety Office

Basic functions of the Safety Office are to develop and carry out highway safety programs aimed at problem areas indicated in fatal and non-fatal highway accident statistics; to initiate and conduct programs of public safety as they pertain to all modes of transportation; to recommend changes in legislation which affect the safe transportation of the public; and to organize and operate staff safety programs.

Establishment of approved courses in driver instruction in secondary schools is supported and encouraged by the Safety Office. During the 1972-73 academic year, 567 high schools in Ontario participated and over 36,000 students completed the course successfully.

The 19th in a series of regional conferences on road safety was held in Sudbury in January, 1973, a gathering that brought together a representative group of community leaders in the area to talk about the motor vehicle accident problem.

Administration

FINANCE AND SUPPLY DIVISION

Financial Branch

The Financial Branch provides the focal point for all accounting throughout the Ministry.

As might be expected, it fulfills the normal functions of recording, monitoring and controlling both expenditures and revenues of the Ministry. It provides advisory assistance to management on financial matters and acts as the liaison between the Ministry and the Central Agency, other arms of government, and the public in the area of finance and accounting.

In addition to the normal processing units, the Branch is responsible for the prequalification of all contractors who wish to bid on Ministry contracts; it maintains a substantial statistical recording unit for the provision of statistical information in quantities, dollar volume, units and prices, indices, geographic locations, etc., concerning most subjects affecting the Ministry; and it provides the Head Office accounting unit for all Branches of the Ministry located at Downsview.

Services Branch

The Services Branch of the Division provides a variety of essential services, including supplies, equipment and buildings.

The Supply Section of the Branch is responsible for the purchase and distribution of most construction and maintenance materials purchased by the Ministry. The total value of orders issued by the Purchasing Office on behalf of the Ministry totals about \$45 million per year.

The Ministry continues to carry on responsibilities assigned in the summer of 1971 for the ordering of all modernized equipment on a Government-wide scale. Value of vehicles ordered for other Ministries was close to \$5.5 million during the year.

The Material Control unit of the Supply Section disposes of all used equipment and surplus materials,

including all used vehicles removed from service by all Ministries of the Ontario Government. Vehicles are normally sold at public auction, with other materials being offered by invitation tender. Revenue from these sales during the year was about \$2 million.

The Equipment Office processed 1,651 vehicles for other Ministries at a cost of \$5,235,015 and \$4,356,100 worth of equipment for the Ministry of Transportation and Communications.

The Special Services Section acts for the Ministry in liaison with the Ministry of Government Services in all matters pertaining to buildings, building sites and office and shop accommodations. The Section is responsible for all communication facilities within the Ministry, and for the administration of Service Centres on controlled access highways.

Among the more unusual communications projects undertaken was the installation of Non-Directional Radio Beacons at seven Northern Ontario air strips.

Twenty-three Service Centres were in operation at the end of the year, 19 on the Macdonald-Cartier Freeway and four on Highway 400, from which approximately \$2,500,000 in revenue was derived. A new Service Centre on Highway 400 was awarded to B.P. Canada Limited. Twenty-one picnic areas were in operation at Service Centres.

Approximately 18,000 tenders were received and processed for 3,560 contracts and sales during the year by the Tenders Section, which processes all tenders on engineering projects, supply contracts, obsolete equipment, material sales and special services projects. More than 2,500 contractors and suppliers attended tender openings arranged by the Section.

The Graphic Arts unit of the Art Design Section completed 486 projects during the year. Ranging from designs and illustrations to scale models, the work included graphs and charts, posters and signs, and silkscreen assignments.

Eight exhibits constructed in the Section's Display Shop were shown at four major exhibitions and 10 other exhibitions. Other projects included construction of 12 wooden models of various designs

of the Intermediate Capacity Transit System for wind tunnel testing and two additional "STOL" aircraft models.

The Record Services Section administers a complete Records Management program, Ministry-wide library facilities and a writing and editing service for Ministry publications. Accumulated benefits under the Records Management program are in excess of \$250,000.

Right-of-Way Branch

This Branch comprises the Land Surveys and Property Offices which are responsible for the legal land surveys and the property acquired by the Ministry. These Offices develop policies and procedures for legal land surveys, plan preparation, appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of plan registration, title searching and real estate conveyancing.

Using these policies and procedures, staff in five Regional Offices prepared and registered 2,496 plans and negotiated 2,590 amicable property settlements. The Ministry did expropriate 524 properties to obtain title for land required to permit contracts to proceed. In addition 142.82 miles of highway were designated

as controlled-access highway, bringing the total mileage of such highways to 2,970.82.

Continuing the program of co-ordinate control surveys on highways throughout the Province, Land Surveys Office added 1,100 control survey monuments for a total of 8,000 control survey monuments now evaluated on the Ontario Co-ordinate System.

The Ministry expended \$25,311,943 in payment of compensation in acquiring title to lands required for highway projects. An additional \$2,542,122 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$1,107,584 was realized by the Ministry from the sale of surplus lands, and \$447,573 from leasing properties.

The extensive training program was continued. In surveying and draughting, 66 candidates tried qualifying examinations and 50 passed; 29 attended courses and examinations in real estate matters and 28 were successful. In the apprentice program for Ontario Land Surveyors, 15 employees successfully wrote various examinations.

Special Reports

Ontario Northland Transportation Commission

The net profit for the Commission (including Star Transfer) for 1972 was \$867,039, down \$210,015 from the profit of the preceding year. Total gross revenue for the year reached a record level of \$35,512, due largely to increased movement of copper, lead and zinc concentrates and fuel oil, together with an increase in the number of long distance phone calls.

Expenses increased by \$2,154,032, mainly because of increased wages and fringe benefits and increased commissions paid to long distance telephone companies.

Carload Freight

Carload freight increased by 5.1 percent, producing revenues of \$17,362,421 from a total tonnage of 5,589,203. Freight growth during the year was due largely to increased transportation of mine products, newsprint, lumber and other products.

Express Freight

Revenue from express freight operations increased by \$53,167 over 1972. The program to update equipment and facilities continued with replacement of delivery trucks and improvement at various terminals. The maintenance of express freight rates between points on the Ontario Northland Railway,

which are at least 20 percent below national rates for equivalent distances, was continued as part of the Commission's policy of assisting in Northern Ontario development.

Passenger Services

Revenue from regular bus services increased by 30.4 percent and from charters by 61.5 percent. Revenue from rail passenger service was up by 11.5 percent, with the number of passengers carried by the popular Polar Bear Express, the summer excursion train between Cochrane and Moosonee, increasing by more than 19,000 over 1971.

Communications

Communications revenues increased by 9.9 percent over 1971, and expenses were held to an increase of 4.4 percent. Net revenue was 20.5 percent higher than in 1971, due principally to an increase of 12 percent in long distance calling. The Cochrane-Moosonee microwave system extension, designed to provide television service to the Moosonee-Moose Factory area, went into operation on August 1, 1972. Planning continues for the improvement of the telecommunications service to the Hudson Bay community of Winisk through the use of Telesat, Canada's communications satellite, ANIK 1.

Ontario Highway Transport Board

Board Sitzings

The Board continued to hold meetings in various parts of the Province where it is most convenient and economical for parties involved. Applications received by the Board totalled 2,616, of which 1,437 were related to The Public Commercial Vehicles Act; 521 to The Public Vehicles Act; and 658 to The Motor Vehicle Transport Act (Canada).

Revenue

Following is the statement of revenue of the Ontario Highway Transport Board:

Revenue 1972

Application fees	—	\$86,695.00
Hearing costs	—	22,885.00
Tariff of Tolls	—	51,231.25
Fees for certificates, etc.	—	1,638.00

Gross Revenue	\$162,449.25
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Less refunds on applications and tariff of tolls	2,097.97
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Net Revenue	\$160,351.28
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Transportation Operations Branch

This Branch is responsible for the administration of all public transportation systems operated by or for the Ministry. These include the Lakeshore commuter rail service operated by Canadian National Railways, commuter bus services operated by Gray Coach Lines and Trailways of Canada, Copper Cliff Shift Transit, a demonstration project introduced in October, 1972 and operated by Sudbury Transit, and norOntair, a demonstration air service operated by White River Air Services Limited.

In January, 1972, the Ministry concluded its three-year Dial-a-Bus demonstration project in Bay Ridges and the service was turned over to the Township of Pickering for continued operation.

GO Transit carried 5.8 million train passengers and 3.5 million bus passengers during the fiscal year, a total increase of 500,000 passengers over the preceding year. NorOntair carried 11,000 passengers, with passenger volumes doubling over corresponding months in the preceding year.

In the fall of 1972, orders were placed for 30 new commuter coaches and four locomotives. When delivered, they will be used to provide new commuter services between Toronto and Georgetown, and to increase capacity on the Lakeshore line.

Electronic Computing Branch

The Electronic Computing Branch is responsible for the development of applications and the provision of computer processing services to the various Divisions of this Ministry and to other Ministries of the Ontario Government.

The activities of the Branch are organized into a Development Office, Technical Support Section, Operations Office, and Queen's Park Data Processing Section.

Development Office responsibilities include design, development and maintenance of systems for applications which cross the spectrum of engineering and scientific activities, management information and financial reporting.

The Technical Support Section is responsible for the development and implementation of system software and the maintenance of the current operating system. During the year, this Section supervised the installation of time sharing, thereby allowing this Branch to support and offer on-line systems throughout the Ministry.

The Operations Office is responsible for the provision of computer services such as technical control, keypunching, storage, and security of user data records on tape and card media, through the Branch's Production Section, the scheduling of jobs to meet customer needs, and the monitoring and auditing of production systems.

The Queen's Park Data Processing Section is the latest addition to this Branch and was brought about as a result of the integration of the former Department of Highways and Department of Transport.

The Section's function is to serve the Assistant Deputy Minister, Drivers and Vehicles, by maintaining automated information files, producing documents and providing on-line inquiry facilities for licensing and control services.

Management Services Office

The Management Services Office is an internal consulting service to which senior management and operation managers may turn for solutions to immediate and long range problems. In this capacity, the Office's primary function is to advise and recommend to management efficient, effective and economic utilization of human and material resources to meet present and future needs.

Projects undertaken by this Office during the year included:

Automated Vehicle Registration System.

An Inter-Ministerial Study was first carried out to ascertain the feasibility of such a system. As a result of the findings of this study, an Inter-Ministerial task force consisting of staff from the Ministry of the Attorney General, Ministry of Solicitor General, Ministry of Consumer and Commercial Relations, Ministry of Transportation and Communications, Management Board, and a consultant was formed to develop and implement this system which will feature automated servicing of a high volume of enquiries, some of which will be computer to computer.

Restructuring of the Registrar's Division.

This review recommended restructuring the Division into a Regional Operations Division and a Licensing and Control (Head Office) Division reporting to the Assistant Deputy Minister, Drivers and Vehicles. Approval was obtained from Management Board and implementation is scheduled to take place over the next 18 months.

Surveys Operations Review.

All survey operations, legal, engineering, photogrammetric, construction and audit in the Regions, Districts and Head Office are included in this project. Anticipated completion date is late summer, 1973.

Construction Management Study.

This study involved development of a manhour budget system for field engineering for construction projects. The system, which includes a feedback mechanism for manhour control and utilization for District operating supervisors and managers, was implemented during the spring of 1973.

In addition to carrying out the foregoing type of studies, Management Services provided liaison and input to the Operational Review of the Ministry by the Management Audit Branch of Management Board. Similar assistance was given to the Task Force on Decentralization of Government Administration.

Program Analysis Office

The functions of the Program Analysis Office have been expanded to embrace the recommendations of the Committee on Government Productivity Reports.

Realization of the importance of resource allocation, goal setting and performance review necessitated a close examination of the Ministry's programs. Changes have taken place in the Ministry's program structure to allow for effective description of programs and the evaluation of their performance.

The Program Analysis Office is responsible, among other things, for determining the Ministry's financial profile over the short (annual) and medium (four year) basis. It also examines 10 to 20-year forecasts of cash flows and various methods of funding and revenue generation. With this information, the Ministry's output in terms of goods and services can be measured with respect to the effectiveness of resource allocation.

A major part of this Office's activities involves close liaison with the Management Board of Treasury, Resources Development, and other Ministries of the Government.

In determining the most effective program, policy analysis and review is carried out as an aid to the decision making process.

Audit Branch

The Audit Branch is responsible for the internal audit activities of the Ministry. The Branch is divided into two areas of responsibility: Financial Audit, and Engineering Audit.

Financial Audit is engaged in the expenditure/revenue/operational review of the Ministry's 18 District Offices, five Regional Offices and Head Office administrative units. The group also carries out some 969 audits in municipalities dealing with Ministry-subsidized road and urban transit expenditures, a function which extends to such agencies as the Ontario Northland Transportation Commission and specific programs involving expressways, connecting links, etc.

Engineering Audit utilizes both field Engineering Audit staff located in the five Regional Offices, and an office contract checking staff which is involved primarily with the Ministry's capital construction program. Some 250 Ministry capital contract audits and approximately 200 municipal contract audits involving Ministry subsidies were carried out during the year. Claims investigations, weigh audits, confirmation of final contract pay quantities on all contracts, Force Accounts, etc., rounded out the group's activities.

Legal Branch

The Legal Branch is a law office within the Ministry which provides legal services to the Minister and Ministry staff. The Branch's legal officers are located at Downsview, at Queen's Park, with Drivers and Vehicles, and at each of the Regions with the exception of the Northwestern Region.

The Branch provides legal advice on all aspects of the Ministry's programmes and prepares the legal documentation through which such programmes are carried out. Through its Legislative Counsel Office, the Branch advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes which the Ministry administers. Legal Branch counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact.

Through its Insurance and Claims Section, the Branch administers the insurance policies held by the Ministry and processes the many claims with which the Ministry becomes involved each year.

Ministry Expenditure by Highway

April 1, 1972 to March 31, 1973

MINISTRY EXPENDITURE BY HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Quebec Boundary - Windsor	\$10,308,982	\$1,973,514
3	Fort Erie - Windsor	2,095,698	1,080,337
4	Port Stanley - Flesherton	894,484	1,024,581
5	Toronto - Paris	1,074,978	304,214
6	Port Dover - Tobermory	890,041	1,105,914
7	Ottawa - Sarnia	10,179,350	2,598,754
7A	Hwy. 115 - Hwy. 12 (Manchester)	175	125,562
8	Niagara Falls - Goderich (7)	36,816	362,370
9	Hwy. 11 - Kincardine	483,246	916,155
10	Port Credit - Owen Sound	1,933,617	505,337
11	Toronto - Rainy River	8,968,378	4,859,322
12	Whitby - Midland (7)	822,458	504,060
14	Bloomfield - Marmora	336,523	157,471
15	Kingston - Ottawa (7)	460,875	737,959
16	Johnstown - Ottawa	933,779	241,555
17	Quebec Boundary - Manitoba Boundary	7,495,746	5,528,739
18	Leamington - Windsor	10,537	120,462
18A	Kingsville - Hwy. 18	26,124	55,665
19	Port Burwell - Tralee	237,291	279,492
20	Niagara Falls - Hamilton	495,146	315,195
21	Hwy. 3 (Morpeth) - Owen Sound	342,962	707,196
22	London - Hwy. 7	865	433,804
23	Hwy. 7 - Hwy. 9 (Teviotdale)	23,072	204,902
24	Port Dover - Collingwood	910,353	459,523
24A	Paris - Galt	69,548	44,329
25	Oakville - Hwy. 24 (Ospringle Mills)	460,809	142,442
26	Barrie - Owen Sound	113,706	485,920
27	Toronto - Penetanguishene	2,512,749	541,363
28	Port Hope - Bancroft	309,808	325,143
29	Brockville - Arnprior (15)	2,363	155,311
30	Brighton - Havelock	15,735	115,458
31	Morrisburg - Ottawa	585,631	192,149
32	Gananoque - Hwy. 15	541	33,027
33	Kingston - Stirling	2,702,029	265,842
34	Hwy. 2 (Lancaster) - Hawkesbury	40,057	131,642
35	Hwy. 401 (Newcastle) - Dwight	1,723,988	520,155
35A	Fenelon Falls - Hwy. 35	13	6,456
36	Burleigh Falls - Lindsay	64,793	117,109
37	Belleville - Hwy. 7 (Actinolite)	42,531	100,211
38	Kingston - Hwy. 7 (N. of Sharbot Lake)	47,932	130,869
40	Chatham - Sarnia	1,760,724	163,605
40A	Sarnia Bypass, Hwy. 402 - Hwy. 40	—	12,101
41	Napanee - Pembroke	790,607	414,292
42	Brockville - Westport (29)	986,318	93,395
43	Alexandria - Perth	478,088	308,803
44	Hwy. 17 - Hwy. 29 (Almonte)	107	24,965
45	Cobourg - Norwood	13,690	116,468
46	Hwy. 7 (E. of Manilla) - Coboconk	6,033	88,320
47	Hwy. 48 (N. of Hwy. 7) - E. of Hwys. 7 & 12	82,184	129,536
48	Toronto - Hwy. 46 (Bolsover)	612,961	384,311
49	Picton - Hwy. 2 (W. of Deseronto)	31,320	52,802
50	Toronto - Hwy. 9 (N. of Palgrave)	312,424	117,359
51	Rondeau Provincial Park - Jct. Hwy. 3	494	9,313
52	N. of Hwy. 97 S. to Hwy. 2	60,459	63,897
53	Hamilton - Hwy. 2 (Eastwood)	6,248	165,326
54	Cayuga - Cainsville	82,679	135,323
55	Jct. Hwy. 8 to Niagara	—	67,241

MINISTRY EXPENDITURE BY HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
56	Jct. Hwy. 3 to Jct. Hwys. 53 & 20	20,273	79,917
57	Hwy. 3A - Bismark	420	—
58	Port Colborne - St. Catharines	698,962	281,331
59	Long Point - Hwy. 3 (E. of Tillsonburg)	145,900	244,221
60	Hwy. 17 (W. of Renfrew) - Huntsville	2,849,339	429,747
61	International Border - Thunder Bay	39,899	87,491
62	Hwy. 14 (N. of Belleville) - Pembroke	542,834	478,929
63	North Bay - Quebec Boundary	865,806	148,642
64	Sturgeon Falls - Hwy. 11	593,671	279,910
65	Quebec Boundary - Matachewan	596,079	174,186
66	Quebec Boundary - Hwy. 65	1,362,387	171,028
67	Iroquois Falls - Hwy. 101	191,139	51,698
68	Hwy. 17 (Espanola) - South Baymouth	832,165	280,758
69	Hwy. 12 (N. of Brechin) - Capreol	2,323,379	791,299
70	Springmount - Hepworth	170	35,208
71	Fort Frances - Hwy. 17 (E. of Kenora)	1,525,611	203,838
72	Hwy. 17 (Dinorwic) - Sioux Lookout	12,938	100,613
73	Port Bruce - Dorchester	324,523	81,365
74	Hwy. 3 (New Sarum) - Nilestown	7,007	70,672
76	Hwy. 3 (Eagle) - Hwy. 2	469,273	31,191
77	Leamington - Hwy. 401 (N. of Comber)	36,720	38,863
78	Hwy. 21 (Dresden) - Wallaceburg	1,082	28,663
79	Hwy. 2 (Bothwell) - Hwy. 7	537,388	442,678
80	Hwy. 2 (S. of Glencoe) - Courtright	14,825	112,812
81	Delaware - Grand Bend	17,255	133,101
82	Hwy. 7 (Thedford) - Hwy. 21	12,275	23,282
83	Hwy. 23 (Russeldale) - Hwy. 21	5,170	67,522
84	Hensall - St. Joseph	134	29,869
85	Kitchener - Elmira	121,226	31,797
86	Guelph - Amberley	5,783	309,955
87	Harriston - Hwy. 86 (Bluevale)	178	76,357
88	Bradford - Hwy. 27 (Bond Head)	3,439	24,648
89	Hwy. 400 - Hwy. 23 (E. of Palmerston)	351,070	274,091
90	Barrie - Angus	6,878	46,336
91	Stayner - Duntroon	79	19,851
92	Elmvale - Wasaga Beach	77,146	300,170
93	Hwy. 11 (E. of Barrie) - Waverley	66	84,380
94	Callander - Hwy. 17 (S. of North Bay)	156,500	22,313
95	Hornes Point - Wolfe Island	587	25,643
96	Quebec Head - W. end of Wolfe Island	48,844	77,109
97	Hwy. 6 (Freelton) - Hickson	93,150	205,082
99	Dundas - Hwy. 24 (N. of Brantford)	312,965	67,219
101	Quebec Boundary - Hwy. 17 (Wawa)	1,171,451	867,370
102	Thunder Bay - Sistonens Corners	162,574	56,385
103	Port Severn - Hwy. 69	33,545	107,718
104	Hwy. 9 - Grand Valley	—	6,540
105	Hwy. 17 - Red Lake	186,372	209,769
106	Hwy. 28 (Dale) - Hwy. 2 (Welcome)	1,488	12,771
108	Hwy. 17 - Hwy. 639 (Quirke Lake)	1,798	84,437
112	Hwy. 11 - Hwy. 66 (Swastika)	173,281	28,540
115	Newcastle - Peterborough	1,825	87,602
116	Hwy. 72 (Patricia) - Hudson	17,686	22,754
117	Metro N. Limits - Hwy. 7	—	9,294
118	Dorset - Hwy. 69	481,288	147,112
119	Hwy. 17 (Dryden) - Richan	52,591	25,563
121	Hwy. 28 - Hwy. 35 (S. of Fenelon Falls)	691,810	259,424
122	QEW (Oakville) - QEW (N. of Clarkson)	41,416	—

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
123	Hwy. 11 - North Bay Airport	—	1,121
124	Sundridge - Parry Sound	548,932	203,538
125	Hwy. 105 - Red Lake	79,228	15,665
126	Hwy. 401 - Hwy. 2 (London)	686	29,873
127	Maynooth - Hwy. 60 (E. of Whitney)	—	70,678
128	Kenora - Redditt	121,249	37,027
129	Thessalon - Chapleau	183,299	409,439
130	Thunder Bay - Hwy. 61	20,022	38,799
132	Renfrew - Hwy. 41	1,837	55,747
133	Hwy. 33 (Millhaven) - Hwy. 401	191	19,607
135	Hwy. 401 - Hwy. 2 (London)	—	14,422
136	Hwy. 24 - Orangeville	221	20,786
137	Hwy. 401 - Thousand Islands Bridge	—	11,944
138	Cornwall - Monkland	68,748	59,464
140	Hwy. 3 (Port Colborne) - Hwy. 20	135,730	66,012
144	Sudbury - Hwy. 101	2,194,296	527,303
400	Toronto - Hwy. 12 (Coldwater)	10,989,758	972,293
401	(MCF) Quebec Boundary - Windsor	12,669,792	6,183,254
402	Hwy. 7 - Blue Water Bridge	944,697	32,800
403	Burlington - Brantford	4,123,855	469,403
404	Toronto - Hwys. 7 & 12	687,471	—
405	QEW - International Bridge (Queenston)	2,963	88,033
406	Hwys. 20 & 58 - QEW	341,082	82,144
407	Hwys. 35 & 115 - Hwy. 27	1,437,136	—
409	Belfield Expressway, Hwy. 401 - Int'l Airport	2,242,307	—
410	Hwy. 401 - Hwy. 7 (Brampton)	400,953	—
416	Johnstown - Ottawa	1,271,256	—
417	Quebec Boundary - Ottawa	12,479,755	139,293
420	QEW - Rainbow Bridge (Niagara Falls)	142,530	—
427	QEW - Hwy. 401	1,557,491	336,348
	QEW, Toronto - Fort Erie	26,632,853	2,214,092
	Ottawa Queensway	—	256,436
500	Denbigh - Bancroft	\$ 11,644	\$122,405
502	Napanee - Marysville	362,039	22,283
503	Tory Hill - Kirkfield	172,141	229,136
504	Hwy. 620 - Apsley	85	55,314
505	Hwy. 46 - Uphill	17,823	24,755
506	Plevna - Hwy. 41	1,357	76,259
507	Hwy. 28 (Lakefield) - Hwy. 503	112,241	113,720
508	Barnstown - Black Donald Mines	236	78,570
509	Hwy. 7 - Snow Road Station	9,059	35,675
510	Magnetawan - Hwy. 124	—	5,420
511	Brightside - Hwy. 508	352,113	93,369
512	Eganville - Hwy. 60	98,672	100,845
513	Hwy. 132 - East of Hyndford	8,085	28,388
515	Hwy. 512 - Combermere	75,492	96,789
517	Twp. Rd. (near New Carlow) - Hwy. 62	8,590	30,829
518	Sand Lake - Hwy. 69	90,524	262,750
519	Hwy. 121 - Redstone Lake	261,388	99,331
520	Burk's Falls - Ardbeg	620,196	155,886
522	Hwy. 11 - West of Loring	1,922	146,967
523	Lyell Twp. Line - Hwy. 60	63,188	40,132
524	Hwy. 522 - Hwy. 534 (East of Restoule)	—	14,445
526	Hwy. 69 - West of Britt	167	10,941
527	Baysville - Huntsville	964	—

MINISTRY EXPENDITURE BY HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
528	Wolseley Bay - Hwy. 64	8,964	29,712
528A	Pine Cove Landing - Hwy. 528	—	15,119
529	Hwy. 69 - Hwy. 69 (Magnetawan River)	1,087	51,028
529A	Hwy. 529 - Bayfield Wharf	207	14,402
530	Hwy. 519 - Hwy. 35 (Carnarvon)	26,044	51,385
531	Bonfield - Hwy. 17	—	8,810
532	Hwy. 11 (South of Bracebridge) - Hwy. 69	43,682	137,332
533	Mattawa - Hwy. 63	50	119,277
534	Powassan - Restoule	114,174	98,125
535	Hwy. 64 - Riviere Veuve	238,959	126,808
536	Hwy. 17 - Creighton	3,199	12,379
537	Hwy. 69 - Hwy. 17 (Wahnapitae)	135,285	51,071
538	Algoma Mines Loop	—	16,368
539	Hwy. 64 - Warren	74,964	103,707
539A	Hwy. 539 - Tertiary Road 805	—	12,329
540	Little Current - Meldrum Bay	116,939	341,202
540A	Hwy. 540 - Barrie Island	174	12,355
541	Sudbury - Skead	81,408	53,403
541A	Falconbridge - Hwy. 541	129	6,062
542	Hwy. 68 - Gore Bay	114,108	193,585
542A	Hwy. 542 - Tehkummah	106	7,138
543	Long Lake - Sudbury	20,339	18,138
544	Levack - Hwy. 144	118	5,508
545	Hwy. 541 - Milnet	18,394	53,402
546	Hwy. 17 - Mississagi Provincial Park	112,358	161,318
547	Hwy. 101 - Hawk Jct.	—	10,803
548	Hilton Beach - Hwy. 17	1,130,209	145,063
549	Lake Panache - Hwy. 17	476,222	34,245
550	Sault Ste. Marie - Gross Cap	191,450	18,709
551	Providence Bay - Hwy. 540	64,699	59,961
552	Hwy. 556 - Twp. Road (East of Hwy. 17)	3,593	33,929
552A	Hwy. 552 - Hwy. 17	—	2,897
553	Massey - Richie Falls Camp	37,140	175,942
554	Hwy. 546 - Hwy. 129	91,804	34,930
555	Magog Lake - Hwy. 557	—	30,974
556	Hwy. 17 (Heyden) N. Easterly	119,530	80,311
557	Blind River northerly	—	56,096
558	Haileybury - Montreal River	17,437	52,297
559	Hwy. 69 (Nobel) - Hwy. 69	—	41,429
560	Hwy. 11 - Hwy. 144 (South of Gogama)	461,784	326,280
560A	Westree - Hwy. 560	6,149	15,009
561	Bruce Mines - Hwy. 638	83,497	43,201
562	Hwy. 11 (East of Thornloe) - Hwy. 65	12,262	20,548
563	Batchawana - Hwy. 17	—	9,749
564	Blanche River Bridge - Hwy. 112	6,252	16,050
565	Pte. Aux Pins - Hwy. 550	—	2,897
566	Matachewan - Ashley Mine	75,867	39,815
567	East of Silver Centre - N. Cobalt	32,391	59,461
568	Hwy. 11 - Kenogami	—	3,525
569	Hwy. 11 - Hwy. 11 (South of Englehart)	37,942	41,618
570	Sasekinika - Hwy. 11	—	4,338
571	Hwy. 562 - Earlton	—	8,518
572	Hwy. 11 (Ramore) - Hwy. 101	110,522	24,717
573	Charlton - Hwy. 11	117,084	55,390
574	Cochrane - Norembega	17,355	120,944
576	Hwy. 101 - Kam-Kotia Mine	—	35,390
577	Hwy. 101 - Iroquois Falls	119,199	42,275
578	Iroquois Falls - Hwy. 11	177,081	13,161

MINISTRY EXPENDITURE BY HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
579	Cochrane - Gardiner	37,489	48,833
580	Hwy. 11 - Lake Nipigon	—	16,665
581	Hwy. 11 - Remi Lake	5,382	8,926
582	Hurkett - Hwy. 17	—	10,070
583	Mead - Lac Ste. Therese	147,794	70,433
584	Hardrock Mine - Nakina	86,384	126,235
585	Hwy. 11 - Pine Portage	39,008	45,544
586	Hwy. 11 - Lower Shebandowan Lake	75	6,823
587	Silver Islet - Hwys. 11 & 17	6,990	43,588
588	Stanley - Round Lake Road	146,849	116,693
589	Hwys. 11A & 17A - Dog Lake Road	622,091	63,198
590	Hwy. 130 - Hwy. 588 (Nolalu)	32,507	77,011
591	Hwy. 589 Northerly	—	12,723
592	Hwy. 11 (Novar) - Hwy. 11	—	32,135
593	Hwy. 61 - Hwy. 588 (Nolalu)	71,517	106,578
594	Dryden - Hwy. 17	70,224	41,704
595	Hwy. 597 - Hwy. 590	70,854	55,850
596	Kenora - North of Minaki	377,704	60,349
597	Pardee - Hwy. 608	30,837	17,192
598	Hwy. 604 - Hwy. 128 (North of Kenora)	1,117	5,384
599	Ignace - Tertiary Road 808	395,453	310,490
600	Hwy. 71 - Rainy River	—	171,215
601	Hwy. 17 - Dryden	34,709	30,747
602	Fort Francis - Emo	48,972	74,391
603	Hwy. 17 - Dymont	—	5,909
604	Hwy. 17 - Kenora Airport	16,223	10,443
605	Hwy. 17 - Rugby Lake	29,369	15,082
606	Hwy. 17 - Markstay	67	3,183
607	Hwy. 69 (Big Wood) - Hwy. 64	—	26,094
607A	French River - Hwy. 607	—	6,873
608	Hwy. 61 - Hwy. 595 (S. Gillies)	—	37,047
609	Hwy. 105 - Clay Lake	13,134	19,138
610	Hwy. 67 - Hwy. 101 (Hoyle)	122,757	36,093
611	Hwy. 602 (Sherwood) Northerly	6,694	38,617
612	Hwy. 103 (Mactier) - Hwy. 69	—	8,324
613	Hwy. 602 - Lake Despair	139,919	65,772
614	Hwy. 17 - Manitouwadge	94,057	104,608
615	Hwy. 71 - Burditt Lake	5,985	24,209
616	Hwy. 101 - Palomar	—	4,566
617	Hwy. 11 (Stratton) - Hwy. 600	24,954	48,718
618	Red Lake - Madsen	10,811	13,410
619	Hwy. 11 (Pinewood) - Hwy. 621	15,538	54,716
620	Hwy. 62 - Hwy. 28 (Apsley)	5,421	92,972
620A	Hwy. 620 - Hwy. 28	—	1,003
621	Hwy. 11 - Lake of the Woods	9,792	52,779
622	Hwy. 11 (Atikokan) Northerly	—	12,774
623	Hwy. 11 - Sapawe	—	5,207
624	Hwy. 11 - Larder Lake	98,837	119,318
625	Caramat - Hwy. 11	5,382	44,255
626	Matheson - Porquis Jct.	14,978	65,186
627	Heron Bay - Hwy. 17	—	15,020
628	Red Rock - Hwys. 11 & 17	—	11,071
629	Timmins - Timmins Airport	53,058	14,385
630	Kiosk - Hwy. 17	112,104	53,603
631	South of Hornepayne - Hwy. 11	1,037,606	278,847
632	Hwy. 118 - Rosseau	—	23,037
633	Hwy. 11 - Kawene	—	6,221

MINISTRY EXPENDITURE BY HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
634	Val Caron - Hwy. 144	13,082	36,326
635	Hwy. 17 - Ottawa River Bridge	—	4,933
636	Hwy. 11 - Frederick House	59,972	8,423
637	Hwy. 69 - Killarney	22,968	200,505
638	Dunns Valley - Echo Bay	869,027	83,547
639	Hwy. 108 - Hwy. 546	992	68,837
640	Hwy. 571 - Earlton Airport Entrance	—	4,023
641	Hwy. 17 - Pellatt	—	24,218
642	Alcona - Sioux Lookout	—	28,874
643	Hwy. 584 - Twp. Road to Cavell	—	22,927
644	Hwy. 69 (Pte. Au Baril) Easterly	39	2,645
645	Hwy. 529 - Bing Inlet	174	12,011
646	Pickle Crow - Central Patricia	—	5,651
647	Hwy. 17 - Blue Lake Provincial Park	—	11,052
648	Dyno Mine - West Jct. Hwy. 121	12,537	84,636
649	Bobcaygeon - Hwy. 121	2,172	28,867
650	O.N.R. Right-of-Way - Hwy. 112	55,945	11,321
651	Hwy. 101 - Missanabie	6,102	116,013
652	Wade Lake - Hwy. 574	—	24,641
653	Portage Du Forte Bridge - Hwy. 17	12,717	22,385
654	Hwy. 11 - Nipissing	262,528	54,564
655	Timmins - Ward Kidd Twp. Boundary	—	30,595
656	Hwy. 533 Northerly	—	5,026
657	Gold Pines - Hwy. 105	—	6,706
658	Hwy. 17 - Fairbank Provincial Park	846	54,264
659	Hwy. 604 - Hwy. 128	—	25,553
660	Bala - Hwy. 103	28,488	51,854
661	Gogama - Hwy. 144	—	7,762
663	Hwy. 11 (West of Hearst) Northerly	5,382	7,799

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ANNUAL REPORT

FISCAL YEAR ENDING MARCH 31, 1974



Ministry of
Transportation and
Communications

ANNUAL REPORT

**For the fiscal year ending
March 31, 1974**



Ontario

**Ministry of
Transportation and
Communications**



Office of the
Minister

Ministry of
Transportation &
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

December 31, 1974

TO THE HONOURABLE PAULINE M. McGIBBON, O.C.,
B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before
you the Annual Report for the Ministry of
Transportation and Communications for the fiscal
year ending March 31, 1974.

Respectfully submitted

A handwritten signature in cursive script, reading "John R. Rhodes".

John R. Rhodes,
Minister.



Office of the
Deputy Minister

Ministry of
Transportation &
Communications

416/248-3604

East Building
Downsview Ontario

December 31, 1974

TO THE HONOURABLE JOHN R. RHODES,
Minister of Transportation and Communications, Ontario.

Sir:

I have the honour to present the report of the
activities of the Ministry of Transportation
and Communications for the fiscal year ending
March 31, 1974.

Respectfully submitted

A handwritten signature in dark ink, reading "Harold Gilbert".

Harold Gilbert
Deputy Minister.

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Organization

The Ontario Ministry of Transportation and Communications, with headquarters at Downsview, administers five Regions embracing 18 Districts throughout the province.

Like other Ministries of the Ontario government, the Ministry of Transportation and Communications is headed by a Minister of the Crown, who is an elected member of the Ontario Legislature. The Minister is advised on engineering and general policy matters by his Deputy Minister, who has the over-all responsibility for the day-to-day operations of the Ministry.

The Deputy Minister is aided by four Assistant Deputy Ministers — one responsible for Planning, Research and Development; another for Engineering and Operations; the third for Administration; and the fourth for Drivers and Vehicles.

The Assistant Deputy Ministers are assisted by a group of Executive Directors, to whom the Directors of the various Branches report. Regional Directors report directly to the Deputy Minister.

Deputy Minister's Summary

The past year has been another period of progress towards the Ministry's goal of providing Ontario with a balanced and integrated transportation system and with a telecommunications system that will best serve the interests of the people of the province. While the provincial highway system is, and will into the foreseeable future be the most essential factor in the fast and efficient movement of people and goods, considerable emphasis was placed in the past year on the planning and implementation of programs designed to ease urban transportation problems, particularly in and around the province's metropolitan centres.

The Ministry's involvement in urban transportation is a continuation of a program introduced by the Government in 1972, which proposed general improvement of transit facilities in urban centres throughout the province.

Spurred on by the success of the GO Train commuter service, inaugurated in 1967 between communities along the Lake Ontario shoreline and downtown Toronto, final preparations were being made at the end of the fiscal year for the launching of a new GO Train service between Toronto and Georgetown.

Dial-a-Bus, which was introduced as a feeder service to the original GO Train service, expanded to several other centres in the province during the year, transportation studies were undertaken, with subsidy assistance, in dozens of municipalities in search of programs to improve transit services during rush-hour periods; Trans-Cab, which provides transportation to fixed-route bus stops in low-density areas, was introduced in the Kawartha Heights area of Peterborough, and in a short time had more than doubled public transit use in the district.

More than \$31.4 million in capital transit subsidies was provided to 36 municipalities during the year, including funds to Metropolitan Toronto for the extension of its subway system. The Government also pays up to 50 per cent of deficits incurred by municipalities in the operation of public transit systems.

In June, 1973, the Government formed the Ontario Transportation Development Corporation to promote the development, production and marketing in Canada and abroad of innovative transit systems.

Administrative and operational responsibilities for norOntair, the Government's air commuter service in northeastern Ontario, were turned over to the Ontario Northland Transportation commission. norOntair's passenger volume increased by more than 5,000 over the preceding year, and studies are being made of the possibility of extending the service to several centres in the northwestern part of the province.

Major developments in the area of communications during the year included planning, between the Ministry and telecommunications carriers in northern Ontario of ways and means to ensure that basic telephone service is available to the largest possible number of residents; and undertaking to link some 30 communities in the remote north with one another and the outside world by use of a long-distance microwave system and the TELESAT communications satellite; and proposals for expanding broadcasting, including cable services, in the north.

Work related to the Ministry's responsibilities for all aspects of driver and vehicle safety in the province, and for the examination, licensing and control of drivers, continues to increase as motorists take to the highways in ever-increasing numbers. More than 3.8 million motorists, driving close to 3.6 million vehicles, travelled an estimated 37.7 billion miles in 1973. The number of vehicles registered was up 6.3 per cent and the number of licensed drivers rose by 4.2 percent.

Construction and maintenance costs for King's Highways totalled \$356,036,060 for the fiscal year ending March 31, 1974. Subsidies to municipalities, for the same period, to assist in their transportation programs totalled \$266,098,241.

Following is a summary of expenditures reported by the Financial Comptroller for the fiscal year 1973-74, with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	March 31, 1973	March 31, 1974
Ministry Administration	20,052,605	31,660,084
Maintenance	89,079,376	94,881,264
Construction	231,282,641	261,154,796
Municipal Subsidies	232,308,838	266,098,241
Public Operations	6,552,851	20,769,853
Vehicle and Drivers	11,291,910	12,456,825
Common Carriers	2,854,470	3,304,291
Ontario Seasonal Employment	4,158,934	347,513
TOTAL GROSS EXPENDITURE	597,581,625	690,672,867

Deputy Minister's Office

COMMUNICATIONS DIVISION

The Communications Division is responsible for developing and administering an Ontario telecommunications policy to ensure that the interests of the people of Ontario are fully represented in the developments associated with radio and television broadcasting, educational television, cable and special purpose video, data transmission systems, telephone and telegraph services and the use of the Telesat communications satellite.

During the year, the Communications Division continued to pursue its objectives:

- development of an Ontario communications policy;
- negotiations on communications policy with other provinces and the federal government, by actively participating in intergovernmental discussions;
- interventions before the Telecommunications

Committee of the Canadian Transport Commission into Bell Canada and CN/CP Telecommunications rate applications;

- representation before the Canadian Radio — Television Commission, especially related to cable and broadcast policy in Northern Ontario, and in support of applications by the Ontario Educational Communications Authority;
- provision of legal, technical and economic assistance to the Ontario Telephone Service Commission and the independent telephone industry regulated by the Commission;
- development of a sound relationship with the communications industry, including cable, broadcasting, telecommunications carriers and the electronics manufacturing sector.

The Communications Branch became a division on January 1, 1974 reporting to the Deputy Minister. The division has three branches dealing with Policy

Development, Common Carriers and Telecommunications Systems Engineering.

The government's interests in communications calls for expanded responsibilities for Ontario in the decision-making process in Canada.

During 1973, the Communications Branch directed the conduct of the Government of Ontario's interventions before the federal Canadian Transport Commission in both the "A" and "B" rate increase applications of Bell Canada. It also was substantially involved in the federal Telecommunications Cost Inquiry, a complex analysis of the financial structure of the Canadian Telecommunications carrier industry,

PRIORITY DEVELOPMENT BRANCH

The Program Office and the Systems Priority Development Office were amalgamated to form the Priority Development Branch in January, 1974 reporting directly to the Deputy Minister's Office.

The major responsibilities of the new branch are to develop and manage current and long-range programs of the Ministry and to ensure maximum effectiveness of the funds expended on the capital construction program.

The addition of 580 work projects during the year increased the total to 2,960 projects on the Advance Program. Approximately 1,100 groups had active

pre-engineering schedules and from these, there were 140 contracts awarded, 11 non-awards and five cancellations.

LEGAL BRANCH

The Legal Branch is a law office within the Ministry which provides legal services to the Minister and Ministry staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to this Ministry. They are located at Downsview, Queen's Park with Drivers and Vehicles, and at each of the regions with the exception of the Northwestern Region.

The branch provides legal advice on all aspects of the Ministry's programs and prepares the legal documentation through which such programs are carried out. The branch advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes which the Ministry administers. Legal Branch counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact.

Insurance and Claims Section

This section administers the insurance policies held by the Ministry and processes the claims with which the Ministry becomes involved each year.

Planning, Research and Development

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division is composed of two branches - the Engineering Research and Development Branch and the Systems Research and Development Branch.

ENGINEERING RESEARCH AND DEVELOPMENT BRANCH

This branch is responsible for physical research and development programs in pavements, structures, materials and quality assurance, vehicles, physical safety and operations, the environment and the civil engineering aspects of transit systems. These programs are aimed at improving transportation facilities and making them safer and more economical to design, construct and maintain.

As the necessary facilities and expertise can be developed, the branch is widening its scope toward solving problems arising from the regulation of commercial vehicles on the highways, and toward the expansion of safety and environment-oriented research.

A major research and development program has been initiated into guideways for Intermediate Capacity Transit Systems, with the objective of determining the most appropriate and economical means of designing and constructing guideways, at grade, elevated or in tunnel. Projects within this program are underway using the special skills and facilities of consultants and in Ontario Universities. The resources of the branch's Structural and Materials Sections are committed on a priority basis to this line of investigation. In order to evaluate the subsequent performance of elevated guideways, considerable effort has been devoted to developing appropriate testing devices. Notable achievements during the year include the continuing development of both pavement and structural management concepts. Proposals have been developed for a new bridge design load concept and the load testing of existing structures has continued to ensure their safe

capacity. The Ministry is also participating along with all other provinces in a major study under the auspices of the Roads and Transportation Association of Canada to determine the interaction of heavy vehicles and pavement of bridges.

The branch has also conducted a number of vehicle performance tests to evaluate innovative safety improvement concepts. One such study assessed the behavior of vehicles on various pavement types when panic braking or evasive steering manoeuvres are attempted on wet road surfaces. Another study investigated the safety characteristics of school buses in terms of accident avoidance and crash-worthiness which minimize the threat of pupil injuries or death. Safety recommendations regarding requirements for motorized bicycles have also been proposed.

Vehicle safety programs dealing with heavy commercial vehicles including pup trailers were developed and one project demonstrated the need for and means to measure minimum brake performance. This work is continuing on an expanded scale. Means of weighing vehicles electronically have also been perfected and the first installation at a truck inspection station is now planned.

Skid resistance studies continue as an important activity of the Materials Section and trial sections of enhanced pavement textures were laid on new sections of the Toronto By-pass to evaluate both the construction techniques involved and the performance of the improved surfaces under traffic.

An unusual but interesting project was the evaluation of methods of measuring the wake of small boats with a view to devising procedures for control of the effect of wakes on river banks and other crafts.

SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

This branch is responsible for conducting research and development programs in the following areas: human, social and environmental factors; driver-vehicle safety; and traffic flow optimization.

In the past fiscal year, final evaluation of the Staggered Hours Demonstration program at Queen's Park was carried out and completed. The Dial-A-Bus program was assessed through surveys taken at the Canadian National Exhibition and in the York Mills and Armour Heights service areas. In addition, data concerning rider behavior in existing rapid transit stations was gathered and analyzed to aid in the formulation of planning considerations. A study proposal to determine the social effects of Bell Telephone service charge increases was also prepared.

Other work in the branch involved the design and evaluation of the 1973 Christmas drinking and driving campaign and from that, the design and development of a pilot countermeasure program which will be carried out from mid-1974 to early 1976.

Another major project underway is the design and development of a public education program with respect to the use of safety belts.

As reported last year the beginning driver study is continuing. Efforts are now directed at gathering statistics of the study group.

Work was also begun on an evaluation of aspects of the demerit point system.

A small car study has been launched to determine small car accident involvement relative to standard size cars and the associated incidence of death and injury.

A traffic control project, in co-operation with Metropolitan Toronto, has been undertaken to provide smaller communities in Ontario with the technical expertise to modernize and update their traffic control systems.

Systems analysis support was provided for a freeway ramp metering demonstration project scheduled to be underway on the Queen Elizabeth Way later in 1974. Work was also begun on A Bus Priority System to determine the feasibility of improving bus service in metropolitan areas during rush hours. Other studies have been initiated to determine traffic generation and flow patterns and how to best control them. Systems analysis support has also been provided to other areas of the Division engaged in motor vehicle studies.

Transit Demonstration System Section

This section is responsible for the administration of the contract for the Transit Demonstration System project and the study of light rail transit systems.

Aviation Services Section

Under the airport development program steady progress was recorded in the development of an airport system in remote northern areas of the province. There are now five airports in operation at Indian settlements along the coast of James and Hudson Bays. There are also two airports in service in the northwest and two under construction.

Only moderate progress was made in the development of municipal airports under the Ministry's subsidy program. However, some substantial works are planned for the coming year, including paving of the Kirkland Lake Airport and construction of a new airport at Atikokan.

During the past year Aviation Services have been actively involved with the Ontario Northland Transportation Commission in planning for the expansion of norOntair air services into northwestern Ontario. With the basic objective of providing increased travel opportunities for the residents of northern Ontario, activities in support of this task include system passenger forecasting, system design, level of service determination and financial planning. As in the eastern sector, a comprehensive carrier selection process was followed which included the detailed evaluation of various carrier proposals submitted to the ONTC. It is anticipated that services will be inaugurated by the summer of 1975.

This group is also actively involved in monitoring any current and proposed plans or intentions contemplated by the private sector. The objective is to provide analytical data for the assessment of these developments as they relate to the Ministry's air program and related policies. This activity involves close liaison with the mainline and regional carriers as well as with the many local and feeder carriers operating within the province.

ECONOMICS OFFICE

In the past year in northern Ontario this office completed a detailed investigation of freight transportation difficulties, and studies to determine the potential for the utilization of piggy-back services were undertaken.

The policy issues of international bridges were examined and a policy paper prepared for the Cabinet; a review of the economic impact of the Ministry's highway design standards was completed in conjunction with the Design and Research Division; and an investigation of the attitudes and processes of users and carriers in the trucking industry was undertaken.

In addition, a ports policy position was prepared in conjunction with other Ministries and the government's experimental freight rate reduction program in northeastern Ontario was monitored.

PLANNING DIVISION

The function of the Planning Division is to prepare short and long term plans for regional and urban areas of Ontario and provide leadership and guidance to municipalities on transportation matters. These responsibilities are divided into two branches: Systems Planning, and Environmental and Operational Planning.

SYSTEMS PLANNING BRANCH

This branch maintains a continuous planning program for all modes in the total transportation system of Ontario.

Brief summaries of activities of the four offices engaged in this work are given below:-

AREA TRANSPORTATION SYSTEMS OFFICE

Long-term transportation plans for defined segments of the province are provided by this office. The Kitchener Area and the Niagara-Lake Erie studies entered policy decision phases in March 1974.

In northern Ontario the findings of the Kenora-Rainy River, Algoma, Thunder Bay, Northeast Ontario, Sudbury-North Bay and Madawaska studies were reviewed and discussed during presentations within the Ministry.

The Study Review Section was set up to examine the recommendations of earlier area reports, and extended the investigations into eastern, southern and western Ontario.

Work continued on the Provincial Air Service Systems and an interim report was prepared on the services in southern Ontario.

The Provincial Inter-Urban Bus Systems Group supplied basic information to the various area study groups in preparation for studies which will report on all these services and facilities in Ontario.

Assembly of data for the Toronto Airport - Ground Access Study continued.

An inter-ministerial planning study known as Central Ontario Lakeshore Urban Complex (COLUC) was organized to detail the regional development plan for Zone 1 of the Toronto Central Region.

SYSTEMS PLANNING SERVICES OFFICE

The major task performed by the Land Use Group of this office was in the development of land values used to assess proposed highway improvements in the Systems Priority Development Office.

The Specific Studies Group continued work on refining transportation planning data for the other offices of the division.

Several surveys were carried out by the Characteristics Group in support of transportation systems planning activities such as the York Regional Transportation Study.

The 1972 highway inventory and accident data was processed in accordance with new format for the data bank.

The Geographical Design Group produced a wide variety of maps, charts and other visual aids for use in presentations along with ten study reports.

The Computer Liaison Section maintained service to the branch offices and provided regular information, by project, on the ECB charges.

SYSTEMS PRIORITY DEVELOPMENT OFFICE

The Systems Priority Development Office continued with its investigation of the needs and priorities for transportation systems improvement.

A methodology, based on transportation economics and systems analysis was developed and implemented to evaluate the optimum priority for improvements.

Provincial highway needs have been studied and road needs summaries for upper and lower tier municipalities were produced. The needs information was used to evaluate the system priorities for the allocation of capital resources.

MUNICIPAL PLANNING OFFICE

The primary functions of this office are to provide technical and financial assistance to municipalities for the planning of future transportation systems, and systems analyses of major urban transportation facilities.

The 1973-74 studies reflected the emphasis on public transportation facilities.

The Metropolitan Toronto Plan Review Study has continued as a major part of the program. Studies of Regional Ottawa-Carleton, Regional York and the cities of Hamilton, Guelph, Barrie, London, Sudbury, Sault Ste. Marie, Windsor and Mississauga were carried out. Discussions began on studies for the four new Regional Municipalities - Durham, Peel, Halton and Hamilton-Wentworth to develop desirable regional roads systems and to identify their associated needs for funding recommendations.

Other municipalities were assisted in preparing their five-year construction programs.

This office participated both financially and technically in several studies of railways in urban areas in anticipation of federal legislation and funding to facilitate moving railways that impede traffic, are safety hazards or occupy prime urban land.

ENVIRONMENTAL AND OPERATIONAL PLANNING BRANCH

This branch carries out detailed highway planning studies which includes a full range of social, environmental, economic and transportation factors in addition to allowing public involvement through public participation programs.

Brief summaries of the activities of the three offices engaged in these phases of transportation planning are given below.

ENVIRONMENTAL AND FEASIBILITY STUDIES OFFICE

A multi-discipline team process which includes analysis of environmental as well as engineering factors resulted in comprehensive planning of transportation corridors for all modes in the provincial transportation system. Throughout, the general public has had an opportunity to be informed and to participate in the planning process.

In line with further developing its role of providing environmental input, the Environmental Section was separated from the Feasibility Section, and on March 1st, 1974 they became the Environmental Office and the Feasibility Planning Office respectively.

At present, work is well advanced on Environmental Guidelines for "Municipal Roads Projects", "Noise Considerations, Highway Planning and Design" and "Highway Erosion Guidelines for the Protection of Surface Waters". Preliminary groundwork has been laid for decentralizing, to the regional offices, those feasibility planning activities connected with most highway planning studies.

Increased emphasis has been given to integrating the Ministry's planning activities with those of other agencies and Ministries, and Ministry staff has provided a high level of external input to other agency planning studies, such as the Parkway Belt West, the Solandt Enquiry and other Hydro transmission line location studies.

OPERATIONAL PLANNING OFFICE

This office has continued its involvement in short-term planning activities. These may be grouped into a number of programs which include:-

- Provincial Transit Systems, including planning of the Richmond Hill Commuter Rail System;
- Municipal Transit Subsidies - both capital and operating;
- Municipal Studies, encompassing transit utilization, traffic and parking projects;
- Special Projects, such as staggered working hours in Toronto, the Bloor-Danforth Subway easterly extension, and the Toronto Area Transit Operating Authority Report.

SPECIAL PLANNING PROJECTS OFFICE

The Special Planning Projects Office carried out numerous special studies of a priority nature.

It also reviews all land use proposals affecting the Ministry, maintains liaison with other Ministries and agencies, and provides support services to the branch.

Engineering and Operations

OPERATIONS DIVISION

The Operations Division consists of three branches; the Construction Branch, the Maintenance Branch and the Municipal Branch. The division covers the entire province through 18 operating districts.

The number of contracts awarded during the fiscal year totalled 255; 139 for construction and 116 for maintenance.

CONSTRUCTION BRANCH

This branch is responsible for the construction program of the entire province, producing and revising contracts and general specifications, direction of the Operations Branch Technical Training Program, control of construction personnel, and the revising of manuals pertaining to construction.

Following are a few of the many projects undertaken.

Southwestern Region

Chatham, London, Stratford and Owen Sound Districts.

On Highway 40, grading and drainage including four structures from 0.2 miles south of Churchill Road southerly to Highway 80 a distance of 8.29 miles was completed.

The New Hamburg Diversion easterly to Fisher Drive in Kitchener was opened to traffic.

On Highway 26 from 3.6 miles west of Collingwood west limits westerly to Elgin Street in Thornbury, grading, drainage, and hot mix paving, including a structure at Indian Brook, was completed.

Central Region

Toronto, Hamilton and Port Hope Districts.

The interchange at QEW and Highway 20 was completed. Also on the QEW from 0.59 miles east of Gilmore Road easterly 1.34 miles including Thompson Road interchange and four structures were completed.

Grading, drainage, hot mix paving and a structure was completed on Highway 7 from 1.3 miles east of Don Mills Road easterly to Highway 48. Grading, drainage,

hot mix paving and structures at Highway 401 and Highway 2A Interchange and Highway 401 from Meadowvale Road easterly to Rougemount Drive. Highway 2A from Centennial Road easterly for 1.25 miles. Highway 2 from Centennial Road easterly 0.66 miles. Port Union from Highway 2 southerly for 0.4 miles and Sheppard Avenue from Highway 2 northerly for 0.17 miles was completed.

On Highway 7B from Highland Road, Peterborough, northerly for 2.73 miles, grading, drainage and hot mix paving was completed.

Eastern Region

Kingston, Ottawa and Bancroft Districts

On Highway 2, grading, drainage and hot mix paving from 1.9 miles east of Trenton easterly to Belleville west limits including the CPR overhead 0.6 miles west of Belleville west limits was completed.

On Highway 417, grading, drainage and cement treated granular base was completed from Glengarry County Road No. 21 easterly to Highway 34, a distance of 10.6 miles, and from 0.68 miles east of Highway 34 easterly to east of Glengarry County Road No. 24 including Service Road, a distance of 4.35 miles.

Northern Region

Huntsville, Sudbury, North Bay and New Liskeard Districts.

On Highway 124 from 0.2 miles west of Highway 520 westerly for 5.9 miles including a structure, the Whitestone Lake bridge in Dunchurch, grading, drainage, and granular base was completed.

On Highway 654, the South River bridge and approaches at Nipissing was completed.

On Highway 101, hot mix paving from 3.2 miles east of Highway 67 easterly to the west junction of Highway 11 was completed.

This contract included resurfacing on Highway 11 from 0.5 miles north of Wavell southerly to a point 12.5 miles north of Highway 66 and straight hot mix paving from the west junction of Highway 101

easterly to 0.1 miles west of the east junction of Highway 101 for a total of 23.57 miles.

On Highway 68 from 18.5 miles south of Sheguiandah southerly including the McLellan Creek structure, grading, drainage and granular base was completed.

Northwestern Region

Cochrane, Sault Ste. Marie, Thunder Bay and Kenora Districts

On Highway 548, the St. Joseph Island bridge was opened to traffic.

On Highway 638 from 0.7 miles east of Highway 17 at Echo Bay easterly for 7.23 miles including Sylvan Valley bridges 1, 2 and 3, grading, drainage and granular base was completed. Grading, drainage and granular base on the Manitou Road from 18 miles north of Highway 11 northerly for 11.5 miles was completed.

Grading, drainage, granular base and hot mix paving was completed from Sistonens Corners easterly for 1.95 miles including intersection improvement at Highways 17 and 11 and from Highway 102 northerly for 7.35 miles.

MATERIALS AND TESTING OFFICE

This office tests materials and determines suitability and compliance with specifications; provides technical guidance and general supervision on quality control; provides an inspection service at manufacturing plants for pre-qualification and inspection of finished products; investigates and evaluates new materials, products and methods; trains construction staff; and carries out investigational work to find answers to specific problems.

Highlights of work of a non-routine nature, undertaken during the year, included:

- Correlated the Mays Meter with Roughometers and measured the riding quality of 5,000 miles of highway.
- Designed and laid special trial hot mixes in the

Concord Patrol Yard to increase skid resistance of polished pavements.

- Evaluated the use of hot mix storage bins at four plants.
- Assessed the potential use of drum mixing and Gussasphalt.
- Used a delaminator detector for mapping visible and invisible deteriorated areas in bridge decks, and repaired delaminated sections by a newly-developed epoxy injection method.
- Prepared procedures and specifications for cathodic protection methods to be tried on selected bridge decks.
- Provided assistance in grooving and seeding techniques in fresh concrete to improve skid resistance.
- Equipped a new nuclear density Calibration Laboratory.
- Evaluated perforated corrugated plastic pipe, pre-packaged sand drains, and horizontal drilled drains, in slope stabilization.
- Reviewed the performance of elastomeric bridge bearings, which resulted in the decision to change the specification requirements.
- Prepared a tentative specification for hot-poured rubberized asphalt bridge deck waterproofing membranes.
- Carried out a program of tests to determine whether the use of white pigmented resin type curing compound to cure concrete base has an adverse effect on the bond between the base and asphalt overlay.
- The Dynamic Testing Machine, installed during the year, was operational and tests were carried out on projects connected with punching shear of reinforced concrete slabs, load cell calibrations and high-strength bolts as shear connectors.
- Plane strain testing equipment was constructed

in the Foundations Laboratory.

- Records pertaining to Ministry-owned wells were centralized in the Chemical Section.
- The review of 40 Official Plans to determine their adequacy with respect to mineral resource statements.
- Commenced preparation of physiography and known mineral reserves on a county basis.
- Good progress was made toward the final development of the Pavement Management Feedback and Information System.
- Aided in the production of two metric awareness programs.
- Prepared a modular system approach in employing performance objectives for the On-The-Job Training Program.

MAINTENANCE BRANCH

This branch directs and controls all summer and winter maintenance carried out by the districts on all the King's and Secondary highways throughout the province.

Roads snowplowed during the winter months totalled 14,400 miles. Salt used for de-icing roads totalled 382,248 tons and sand used for winter maintenance amounted to 817,912.07 tons.

Some 122,192 trees and shrubs were planted in 17 districts. Herbicide applications for weed and brush control covered 14,489 miles along highway rights-of-way. All 18 districts were active in grass seeding operations over 2,585 acres. Tree removal operations accounted for 7,979 trees by Ministry forces, 1,302 through maintenance contracts and 235 resulting from requests by utility companies.

Mulch pavement mixed and laid by Ministry forces totalled 42 miles in five districts.

Twenty-two zone stripers, zone striped 12,088 miles

of King's and Secondary Highways plus painting 7,150 miles of edge line.

Structural Maintenance Section

This section inspected 1,100 bridges on King's and Secondary Highways and made recommendations to District engineers for repairs and load restrictions where necessary. Contracts were awarded for the cleaning and painting of 11 steel structures and 13,000 lineal feet of bridge handrails. District forces completed the painting of four bridges and 2,650 lineal feet of bridge handrails. Fourteen existing Bailey bridges were renovated to support heavier loading; six Bailey bridges were erected to last for at least 10 years; and 17 were erected to act as temporary detours. Recommendations were made to the districts for waterproofing bridge decks and for installation of special deck expansion joints to facilitate a smoother travelling surface and to avoid continual repairs.

Electrical Section

This section was involved in the design of, and the district electrical crews in the installation of, traffic signals at 84 locations; highway illumination at 390 locations; flashing beacons at 40 locations; and sign lighting at 25 locations.

The Ministry entered into an agreement with the Electrical Utilities Safety Association of Ontario to provide for special training and establish standard work procedures for our Head Office and District Electrical Sections.

Ferry Services

The two ferries, Wolfe Islander and Upper Canada, which are operated by the Ministry between Kingston and Wolfe Island, made 8,629 return trips and carried 175,996 vehicles and 191,262 passengers during the fiscal year.

The ferries, Quinte and Quinte Loyalist, operating between Adolphustown and Glenora made 23,160 return trips and carried 232,604 vehicles. These vessels have no foot passenger accommodation.

Signs and Building Permits Section

Building permits issued during the year by the Signs

and Building Permits Section totalled 6,653, with a valuation of \$392,706,372 for all buildings so covered. Permits for Field Advertising Signs totalled 6,210, with a valuation of \$68,979. Other permits issued included 3,223 Entrance Permits; 1,091 Encroachment Permits; and 2,214 Sign Permits and 5,591 renewals.

MUNICIPAL BRANCH

Subsidies paid to municipalities, including payments for Public Transportation Programs, increased by approximately \$44,030,166 to \$247,856,242. This increase was due to new financial arrangements for county roads and expanded Public Transportation Programs, both of which were approved by 1973 amendments to The Public Transportation and Highway Improvement Act.

During the year, 903 municipalities and 46 Indian Reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition, 47 municipalities received subsidies under the Public Transportation Programs.

	ROAD MILEAGE	APPROVED EXPENDITURE	SUBSIDY PAID
Road and Bridge Section			
Metropolitan Toronto	387.2	27,025,173	13,512,586
Regions	2,245.9	38,066,259	22,367,396
Counties	9,084.2	62,006,345	39,359,917
Townships	50,417.1	70,749,179	40,225,512
Urban Municipalities	15,197.1	175,076,697	82,451,010
TOTAL	77,331.5	\$372,923,653	\$197,916,421
Public Transportation Section			
Rapid Transit	—	23,978,812	14,439,557
Capital Assistance	—	23,014,558	17,221,679
Operating Deficit	—	36,822,694	18,278,585
TOTAL		\$83,816,064	\$49,939,821

County and Regional Roads

Effective January 1, 1973, the Regional Municipalities of Waterloo and Sudbury were established and the County of Waterloo was dissolved. The 1973 expenditures on county,

suburban and regional roads were as follows:

	CONSTRUCTION	MAINTENANCE	TOTAL
Metro Roads	16,925,173	10,100,000	27,025,173
Regions	23,293,282	14,772,977	38,066,259
Counties	41,030,239	20,976,106	62,006,345
TOTAL	\$81,248,694	\$45,849,083	\$127,097,777

Public Transportation

In 1973, \$17,221,679 was spent under a new policy of paying 75 per cent subsidy to municipalities for the purchase of capital transit assets. The existing policy of paying a 50 per cent subsidy on a municipality's contribution towards the operating deficit of a transit system was continued and \$18,278,585 was paid out under this program.

The northern extension of the Yonge Street subway, as well as other subway work, was continued in Metropolitan Toronto, and \$14,439,557 was paid out for this program in 1973.

Municipal Construction

The Municipal Construction staff continued to provide guidance, advice and assistance to personnel of districts, municipalities and consultants in connection with the planning, design and supervision during construction of a substantial number of municipal projects of varying complexity.

Urban Program

In 1973 this branch administered a Connecting Link Program involving 108 projects and an expenditure of \$8,700,000. This expenditure represents 100 per cent, 90 per cent or 75 per cent of the shareable cost depending on whether the project involved is a city, town or village.

Development Roads

This program consisted of 71 projects and an expenditure of \$5,345,000. Usually this expenditure represented 100 per cent of the cost of reconstruction. The road remains under the jurisdiction of the municipality and the work is carried out either on a day labor basis or by means of a contract.

Unincorporated Areas

During 1973, the Ministry expended \$1,712,517 in providing aid to 189 Local Roads Boards, 33 Statute Labour Boards, 23 Indian Reserves and 116 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the province.

A further sum of \$1,030,563 was expended without local participation on the replacement of bridges and on grade improvements involving 125 projects on these roads.

DESIGN DIVISION

The Design Division is responsible for policy and procedures covering the design and traffic operations of all Ministry transportation projects. It consists of two branches: Systems Design and Engineering Services.

SYSTEMS DESIGN BRANCH

This branch is responsible for the development, implementation and updating of design policies, methods and procedures to be used in the design of transportation projects throughout the province. The branch consists of the Systems Design Office and the Systems Technology Development Office.

SYSTEMS DESIGN OFFICE

Within this office, the Geometric Design Section ensures that all geometric aspects of a project satisfy safety and operational criteria. The Project Review Section reviewed 170 projects for accuracy and conformity to current policy. The Drainage Section is responsible for establishing and implementing policy on surface and storm sewer design. The Illumination Section was involved in 289 projects during the year, of which 151 were completed.

SYSTEMS TECHNOLOGY DEVELOPMENT OFFICE

This office is responsible for the development of design technology to improve safety, aesthetic and economic quality of design. To carry out these functions, the office is comprised of the following sections: Automatic Data Processing, Environmental Design, Standards and Technical Development.

The co-ordination of the new ferry service between Tobermory and South Baymouth was administrated by the branch. The construction of a 3,300-ton car-passenger ferry, 366 feet long, 62 feet wide and with the capability of carrying 113 automobiles with sufficient clearance to carry trucks and buses and 530 passengers was 60 per cent completed during this fiscal year. Several contracts for wharfs, channel improvements, parking lots and terminal buildings were awarded. The major marine contracts were completed, or near completion, while the parking lots and terminal buildings were well advanced.

ENGINEERING SERVICES BRANCH

During the first nine months of the year the branch was known as the Design Services Branch and consisted of seven offices - Engineering Surveys, Foundations, Hydrology, Photogrammetry, Soils, Structural, and Program.

In January, 1974, the seven offices were re-organized by combining Photogrammetry, Engineering Surveys and part of the Soils Office in the new Engineering Plans Office. The Foundations, Hydrology and Soils Offices were joined with part of the old Materials and Testing Office to create the Geotechnical Office. The Laboratory Services Office was created by combining all the laboratories previously under the Materials and Testing Office and the Program Office was transferred to a new Priority Development Branch.

During the fiscal year, the Engineering Surveys Office established 369 precise bench marks; 1090 control monuments; updated 180 strip plans and prepared 23 new strip plans.

The Foundations group performed 98 foundation investigations for proposed structures and 16 investigations of specific construction and maintenance problems.

Hydrology activities included 26 reports for the King's Highway structures and 70 for municipal

structures. Two major floods near Thunder Bay and North Bay were investigated.

Photogrammetry produced plans at various scales covering 397 miles of terrain and 130 mosaics covering 8,591 square miles.

Fifty-three studies using remote sensing techniques and covering 12,845 square miles were completed. The Official Road Map and 40 other maps were updated.

The Soils group reviewed 100 soils design reports, 25 pavement selection reports, carried out geophysical surveys, and air photo interpretation studies covering 12,000 square miles.

The Structural Office completed designs and contract documents for 61 structures and supervised the work for 21 others done by consultants. The Municipal Section examined 111 preliminary structure plans, 131 final bridge plans, 213 culvert plans, 62 miscellaneous plans, and inspected 438 existing structures. Significant consulting support was given to the Ministry's intermediate-capacity transportation system development project.

TRAFFIC CONTROL OFFICE

The Traffic Control Office completed seven traffic operational studies in various municipalities, six others were initiated and one additional study approved.

Approximately 300,000 roadside interviews were conducted to assist future planning.

Ten projects were completed to meet the goals of developing new devices and techniques for operational improvements and freeway surveillance. There are still 51 projects underway or being considered.

In the traffic devices area, 70 illumination projects were reviewed; traffic signals installations were approved at 70 locations on the King's Highway system and 364 locations on municipal roads. Staff also participated in computer based traffic signal studies in three cities.

Improvement of traffic signing in general was continued with particular emphasis on the development of symbol signs. A new freeway guide signing policy was also developed and two reports completed on the effect of metrication on traffic control.

TRANSPORTATION OPERATIONS BRANCH

The administration of GO Transit commuter train and bus operations is the responsibility of this branch. This includes the Lakeshore GO trains operated by Canadian National Railways plus Hamilton, Oshawa and Newmarket route bus services operated by Gray Coach Lines. Additional bus service is provided by Trailways of Canada for GO Transit between Richmond Hill and Metro Toronto.

GO Transit experienced its first major train service disruption during the summer of 1973 caused by labor problems between Canadian National Railways and its operating unions. This, coupled with the introduction of a one fare policy throughout Metro

Toronto by the Toronto Transit Commission early in 1973, resulted in 700,000 fewer passengers being carried on GO trains during 1973 compared to the preceding year. Total passengers carried in 1973/74 was 5.1 million compared to 5.8 million in 1972/73.

Although the train service disruptions had some negative effect on GO Transit feeder services that normally connect with train service, the increased patronage on other areas more than offset these decreases. Total bus passengers carried on all routes in the current year were 3.5 million compared to 3.2 million in the preceding year.

GO Transit received 30 new coaches and four new locomotives during the latter part of the year. Some 20 coaches are being used for the new Georgetown service which began operating in late April 1974. The balance are being used to expand capacity on the Lakeshore.

Demonstration Dial-A-Bus services were inaugurated by GO Transit in the York Mills, Armour Heights and Downsview areas of Metropolitan Toronto. This service is under contract to the Toronto Transit Commission for operations.

Administration

FINANCE AND DATA PROCESSING DIVISION

The Finance and Data Processing Division is responsible for providing three categories of services: accounting and financial planning services; programming and computer processing services; and internal management consulting services. The division is also responsible for preparing the Ministry's annual estimates and five-year financial plan.

FINANCIAL BRANCH

The Financial Branch fulfills the normal functions of recording, monitoring and controlling both expenditures and revenues of the Ministry. It provides advisory assistance to management on financial matters and acts as the liaison between the Ministry and the Central Agency, other arms of government, and the public in the area of finance and accounting.

The branch is also responsible for the prequalification of contractors who wish to bid on Ministry contracts. It maintains a substantial statistical recording unit for the provision of statistical information in quantities, dollar volume, units and prices, indices, and geographic locations concerning most subjects affecting the Ministry, and it provides the Head Office accounting unit for all the branches of the Ministry which are located at Downsview.

PROGRAM ANALYSIS OFFICE

The functions of the Program Analysis Office started in 1969 and have been expanded to embrace the recommendations of the Committee on Government Productivity Reports.

Management Board Decisions to implement "Management By Results" program requires the Program Analysis Office to prepare agreements for performance review. These agreements concern themselves with the objectives, costs and time schedules of projects undertaken by the Ministry.

This office is responsible for determining the Ministry's financial profile over the short (annual) and medium (four year) basis.

It also examines 10 to 20 year forecasts of cash flows and various methods of funding and revenue generation. With this information, the Ministry's output in terms of goods and services can be measured with respect to the effectiveness of resource allocation.

The major part of this office's activities involves close liaison with Management Board of Treasury, the Resources Development Policy Field and many other Ministries.

In determining the most effective program, policy analysis and review is carried out as an aid to the decision-making process.

ELECTRONIC COMPUTING BRANCH

The Electronic Computing Branch is responsible for providing programming and computer processing services to this Ministry, and in part, to other Ministries of the Ontario Government.

The activities of the branch are organized into a Development Office, Technical Support Section, Operations Office and Queen's Park Data Processing Section.

The responsibilities of the Development Office include design, development and maintenance of systems for various applications including the spectrum of engineering and scientific activities, management information and financial reporting. During the past year, time sharing programs have been introduced enabling remote regional offices to submit jobs from a terminal, i.e. Road Design applications.

Technical Support Section

This section is responsible for the development and implementation of system software and the maintenance of the current operating system. During the year, this section successfully introduced the ASP Operating Systems (asymmetric multiprocessing system) which links the two Central Processing Units located at Downsview to integrate them into one computer system. The linked IBM 360/model 65 and IBM 370/model 145 carry all batch, timesharing and on-line application work loads.

OPERATIONS OFFICE

The responsibilities of this office are the provision of computer technical control, keypunching, storage and security of user data records on tape and card media, services through the branch's Production Section, the scheduling of jobs to meet customer needs, and the monitor and audit of production systems.

Queen's Park Data Processing Section

This section's responsibilities are that of a dedicated centre serving the Assistant Deputy Minister, Drivers and Vehicles Division in the provision of on-line inquiry, licensing and control services. During the past year, this section has been active in the conversion of the Drivers System to the Downsview facility.

MANAGEMENT SERVICES OFFICE

Management Services Office consists of three sections: Management Science, Financial Services and Drivers and Vehicles.

The role of the office is to assist Ministry managers in providing the province with efficient, competitive and effective transportation services for the movement of people, goods and information.

Office activities include conducting

- feasibility studies,
- operational and organizational reviews;

developing and implementing

- new and revised organization structures,
- manual, management and financial Drivers and Vehicles systems;

developing specifications for ADP systems, programming and coding;

conferring with external consultants and Ministry clients.

RIGHT-OF-WAY AND SERVICES DIVISION

RIGHT -OF-WAY BRANCH

This branch comprises the Land Surveys and Property Offices which are responsible for the legal land surveys and the property acquired by the Ministry.

LAND SURVEYS OFFICE

This office develops policies and procedures for legal land surveys, plan preparation and registration. The five regional offices prepared and registered 1,869 plans which were registered in the appropriate registry and land titles office during the year. In addition 60.09 miles of highway were designated as controlled-access highway, bringing the total mileage of such highways to 3,030.91 miles.

Continuing its program of co-ordinate control surveys on highways throughout the province, Land Surveys established an additional 1,400 control survey monuments for a total of 9,400, now evaluated on the Ontario Co-Ordinate System.

The extensive training program was continued. In surveying and drafting, 75 candidates tried qualifying examinations and 42 passed. In the apprentice program for Ontario Land Surveyors, 12 employees successfully wrote various examinations.

PROPERTY OFFICE

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions, are developed by this office.

Using these policies and procedures, staff in five regional offices negotiated 2,364 amicable property settlements. The Ministry expropriated 457 properties to obtain title for land required to permit contracts to proceed.

The Ministry expended \$38,923,595 in payment of compensation in acquiring title to lands required for highway projects. An additional \$2,307,758 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$770,161 from the sale of surplus lands and \$489,988.60 from leasing properties was received by the Ministry.

The extensive training program was continued and affected 29 staff who attended courses and

examinations in real estate matters and all were successful.

SERVICES BRANCH

SPECIAL SERVICES OFFICE

The Special Services Office undertakes two main programs involving the Ministry's total building requirements, including office furnishings and equipment necessities:

- acts in liaison with the Ministry of Government Services in all matters pertaining to buildings, building sites, and office and shop accommodations with regard to the Ministry's regional and district headquarter complexes.
- designs and prepares architectural drawings and tender documents for construction of the Ministry's patrol garage, storage dome and vehicle inspection station requirements.

This office is also responsible for all communication facilities within the Ministry (radio, teletype, intercom and postal services) and for the administration of service centres on controlled access highways.

One of the communication projects undertaken during the past year was the design of a four-channel U.H.F./F.M. radio system to serve the Metro Dial-a-Bus demonstration project. The entire system equipment complement was completely solid-state and the system concept, we believe, is unique in North America.

Twenty-three service centres were in operation at the end of the year, 19 on Highway 401 and four on Highway 400. Twenty-one picnic area sites located adjacent to service centres were available for the use of the motoring public.

GRAPHIC SERVICES OFFICE

In May 1973, the Graphic Services Office was formed from segments of the former Office Services Section and the inclusion of the former Art and Display Design Section to consolidate all graphic art and reproduction activities of the Ministry.

The principal functions of this office are to provide printing and duplicating services; a wide variety of

high quality black and white and color reproduction services using photographic, Diazo and Xerox methods; and a commercial art and display design service for the various Ministry programs.

Of particular note would be our participation at four major exhibitions and 10 other exhibitions and a production of 26,000,000 impressions in our Offset operation, an increase of almost 4,000,000 over the previous year.

RECORD SERVICES OFFICE

The Record Services Office administers a complete Records Management program, Ministry-wide library facilities and a writing and editing service for Ministry publications. Accumulated benefits under the Records Management program are in excess of \$300,000.

SUPPLY BRANCH

This branch is responsible for the preparation, distribution, and review of procedures for purchasing, stores, tendering, disposal and equipment specifications.

Purchasing Section

This section is responsible for the purchase of all motor vehicles for the Ontario Government, as well as construction and maintenance materials, and general supplies for the Ministry. Annual purchases total about \$50 million.

Material Control Section

The disposal of all used equipment and surplus material for the Ministry as well as all motor vehicles for the Ontario Government is done through this section. Disposal is by means of public auction or tender and sales total about \$2,500,000 a year.

Stores Section

Through this section the Ministry takes advantage of savings by bulk purchasing and facilitates the operational part of the Ministry by having materials available when required. They also recondition and store Bailey bridge components for emergency use

throughout the province. There are currently 225 such installations in the province for the Ministry, municipalities or other agencies.

EQUIPMENT OFFICE

Specifications, replacement and maintenance procedures of the MTC fleet are controlled by this section. New garage control techniques during the last fiscal year resulted in a savings to the Ministry in excess of \$350,000 for a total new equipment value of \$44 million.

A major undertaking of the Equipment Office was the design and partial installation of the second ferry de-icing system, from Kingston to Wolfe Island - the world's longest. New techniques for laying pipes through the ice were developed. The installation will be completed in late 1974.

Tenders Section

Approximately 14,000 tenders were received and processed by Tenders Section for 2,800 contracts and sales during the year by this section, which processes all tenders on engineering projects, supply contracts, obsolete equipment, material sales and special services projects. More than 2,400 contractors and suppliers attended tender openings during the year.

EXTERNAL LIAISON AND COUNSEL OFFICE

The major activities of the executive co-ordinator of External Liaison and the Counsel Office have been to participate in hearings on telecommunications and transportation before the Canadian Transport Commission and other tribunals.

These included rate increase applications by Bell Canada and CN/CP Telecommunications and the cost inquiry on telecommunications. In the area of transportation, the office participated in 12 hearings involving exemptions from the Lord's Day Act, freight rates, passenger services, extension of norOntair routes and an air charter application review.

During the fiscal year, the office was also involved in the investigation of railway costs for the movement of Alberta coal to Ontario markets; the hosting of a meeting of telecommunications regulators representing every province and the setting up of a Committee of Great Lakes, involving Ontario-based Harbour Commission staff and MTC staff, to co-ordinate efforts in respect to Great Lakes transportation.

AUDIT BRANCH

The Audit Branch is responsible for the internal audit activities of the Ministry. To accommodate this function, the branch is segregated into two areas of responsibility.

FINANCIAL AUDIT OFFICE

This group is engaged in the expenditure, revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units.

Some 970 audits were performed in municipalities dealing with Ministry subsidized road and urban transit expenditures.

This function also extends to such agencies as the Ontario Northland Transportation Commission, as well as specific programs involving expressways and connecting links.

ENGINEERING AUDIT OFFICE

With complement in five regional offices and head office, this office audits all phases of the Ministry's capital construction program. Audits are also completed on Ministry subsidized contracts.

Some 300 Ministry capital contract audits, together with approximately 180 municipal contract audits involving Ministry subsidy, were performed.

Claims investigations, over 2,400 weigh audits, confirmation of final contract pay quantities on all contracts and force accounts are also part of this office's activities.

Drivers and Vehicles

Drivers and Vehicles deals with all aspects of the regulation, control and safety of drivers and vehicles in the province.

Between 1962 and the end of 1973, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle collisions were all on the rise. During those years, traffic deaths increased from 1,383 to 1,959 and the population grew from 6.4 million to 7.98 million. The fatality rate per 100,000 did not show any identifiable trend, however, varying from a low of 20.1 in 1970, a high of 24.6 in 1972, then fractionally lower in 1973 at 24.5.

In contrast to the fatality rate, the number of people injured increased steadily, most noticeably in 1973 when it went to a high of 1,224.2 per 100,000 population, compared to a low of 658.0 in 1962.

In 1973 the number of motor vehicle traffic-collisions reported totalled 193,021, an increase of 1.9 per cent over 1972; the number of people injured fatally increased by 1.3 per cent; and the number of personal injuries increased by 2.7 per cent.

The number of miles driven in 1973 was estimated at 37,771,576,000, an increase of 8.3 percent over the 1972 figure.

DRIVER BRANCH

The Driver Branch is responsible for the examination, licensing and control of drivers. The chief functions of the branch include operation of 166 driver-testing facilities throughout the province, administration of the Demerit Point System, maintenance of all driver records on the computer system, licence suspensions and reinstatement of driving privileges.

In 1973, Ontario's driver population increased by 153,087 or 4.15 per cent over 1972 for a total of 3,841,628 licensed drivers. Of this total, 1,460,978 or 38.03 per cent were female.

During the year, driver road tests were given to 305,232 persons applying for original licences and being examined for various reasons. The failure rate on the first try was 30.9 per cent.

Over one million certificates of conviction for traffic violations were recorded. On the basis of these records, 69,448 suspensions of driver licences were applied, compared to 59,233 the previous year. Of these, 1,930 were suspended under the discretionary authority of Section 27 of The Highway Traffic Act after the individual in each case was afforded the opportunity of a hearing. Most of the suspensions were for medical reasons.

Under the Demerit Point System, 101,034 warning letters were issued to drivers at six to eight points; 31,221 drivers were interviewed or were subject to other driver improvement actions at the 9 to 14 point level. Of the total of 8,763 point system suspensions, 6,143 were at 15 points; 2,212 for failing to attend interviews; and 408 for failing to show cause why their licences should not be suspended.

VEHICLE BRANCH

The Vehicle Branch administers The Public Commercial Vehicle Act, The Public Vehicle Act, The Motor Vehicle Transport Act (Canada), The Motorized Snow Vehicle Act and those sections of The Highway Traffic Act which relate to licensing, inspection and regulation of vehicles.

Vehicle Licence Section

This section is responsible for the registration of all motor vehicles, trailers and motorized snow vehicles required to be registered. Service is provided by 291 appointed licence issuing agents across the province. In addition, seven Ministry offices provide this service at Ottawa, Hamilton, Mississauga, Stratford, Oshawa, Chatham and Queen's Park, Toronto.

Highway Carrier Section

This section not only has the responsibility of the licensing and regulation of "for hire" trucks and buses, but has a further responsibility to enforce the provincial weight laws in order to provide protection for highway users and for the highway system itself. A staff of 275 throughout Ontario operates 50 weigh scale locations, 65 patrol vehicles and 12 portable scale units.

The Vehicle Inspection Section

This section administers Section 58 of The Act, which provides that a certificate of mechanical fitness be filed on application for the transfer of the registration of a motor vehicle. In 1973/74, 918,919 certificates of mechanical fitness were submitted to the Ministry as evidence of compliance with the prescribed motor vehicle safety standards. The number of inspections for certificates of mechanical fitness plus safety-lane inspections brought the total of inspections close to the million mark, approximately 26 per cent of Ontario's used car population.

Oversize-Overweight Permit Section

This section issued 33,382 permits for the movement of over-dimensional or overweight vehicle loads in 1973/74.

Motor Vehicle Registration Transactions — April 1, 1973 to March 31, 1974

Passenger	3,125,826
Commercial	600,998
Bus	14,810
Trailer	482,766
Motorcycle	60,301
Transfer of Ownership	1,494,555
Motorized Snow Vehicle	207,265

Special Reports

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

The financial results of the Commission, including Star Transfer Limited, in 1973 resulted in a loss of \$76,408 as compared to a profit of \$867,040 in 1972.

The unfavourable results in 1973 were due to significant increases in operating costs without corresponding increases in revenues, particularly rail freight revenues.

The increase in operating costs was due primarily to the significant wage award granted in January, 1974, which was retroactive to January, 1973, and which is effective for a two year period from that date.

Late in the year, the Commission purchased all the outstanding shares of the Owen Sound Transportation Company and commenced operating the car ferry service between Bruce Peninsula and Manitoulin Island in the spring of 1974.

In November of 1973 the Commission assumed the administrative responsibilities for the operation of norOntair which is carried on by White River Air Services, with norOntair supplying the aircraft.

An audit team of the Ministry of Transportation and Communications conducted an operational audit of the Commission's affairs during 1973, which resulted in a report being tabled late in 1973. This report included certain recommendations which are being examined by management for possible implementation.

Planning and Development

Overall reorganization of the Commission in October, 1973, resulted in formation of a new Planning and Development Department as part of Corporate

Services. It is responsible for corporate planning, industrial engineering, systems development, cost analysis and facilities development. It supplements group staff capabilities where required and provides detailed data to management for short and long-term planning decisions.

Freight Marketing

Despite a small .7 per cent decrease in tonnage handled, carload freight revenues increased by 4.92 per cent to \$18,400,000. Total tonnage was 5,480,000 reflecting 73,956 carloads. The tonnage decrease resulted from rotating strikes plus a 17-day nationwide rail strike last summer; increased revenues were due in part to upward rate adjustments in some commodities and international movement rate increases.

Express Services

Revenue increases of \$20,000 were registered by Express Services in 1973, which had changed its pricing policies and reduced rates in order to stimulate secondary industrial growth.

Passenger Services

Overall bus operation revenues increased 20 per cent in 1973, reflecting greater bus tour and charter bus activity. The fleet of intercity buses increased to a total of 18 with the addition of two new Sleeper Service coaches and one regular service bus.

Communications

Despite the sale of all assets in Quebec, with a resulting revenue drop, increased long distance calling contributed to a rise of 3.6 per cent in gross revenue, and a small increase in net revenue during the year. Direct distance dialing service was provided to Temagami, New Liskeard, Kirkland Lake and surrounding areas, and preparations were made to supply the same service to the Timmins to Iroquois Falls area by mid-1975. Meantime, work neared

completion on providing modern telephone service to the Hudson Bay community of Winisk via satellite while the project of extending microwave to 90 miles beyond Hearst was begun. Improved service was also provided to the various CBC radio networks throughout the system.

In addition, approval was obtained to build a 90-mile hydro power-line from Otter Rapids to Moosonee and Moose Factory. When completed, the line will be sold to Ontario Hydro, and will replace existing diesel-operated plants, now nearing maximum output, as the source of the communities' power needs.

ONTARIO TELEPHONE SERVICE COMMISSION

The Commission is responsible for the administration of The Telephone Act, regulating the operations of Independent Telephone Systems. Telephone services in the province are provided by the Independents, Bell Canada and Ontario Northland Communications Systems.

As of January 1, 1974, there were 39 Independent Telephone Systems in Ontario with approximately 210,000 phones and an estimated total capital expenditure, for plant and equipment, of \$90 million.

During 1973-74, the Commission dealt with 81 applications under the provisions of The Telephone Act, requiring approval for revision in the rate structure; the borrowing or the issuing of capital; the selling or the merging with other telephone systems; or when making agreements for interchange of service.

ONTARIO HIGHWAY TRANSPORT BOARD

Board Sitings

The Board continued to hold meetings in various parts of the province where it is most convenient and economical for parties involved. Applications received by the Board totalled 2,969, of which 1,830 were related to The Public Commercial Vehicles Act; 468

to The Public Vehicles Act; and 671 to The Motor Vehicle Transport Act (Canada).

Revenue

Following is the statement of revenue of the Ontario Highway Transport Board:

Revenue 1973

Application fees —	\$103,850.00
Hearing costs —	29,885.00
Tariff of Tolls —	75,078.62
Fees for certificates, etc—	3,392.92
Gross Revenue	\$212,206.54
Less refunds on applications and tariff of tolls	1,684.00
Net Revenue	\$210,522.54

ONTARIO TRANSPORTATION DEVELOPMENT CORPORATION

The Ontario Transportation Development Corporation was established in June, 1973 to help improve the quality of urban life through transit innovations. It now has established a sound organizational-financial and operational framework to meet this objective.

OTDC organization is structured so each product is processed through the development, management, marketing and financial stages on a line basis. Product development activities are supported by line divisions including research and development, marketing and sales, and planning.

OTDC initiated its light rail vehicle (LRV) program in response to recently identified needs of Canadian cities for new light rail rapid transit systems. Working directly with transit operators in Toronto, OTDC will complete design, development and vehicle procurement specifications in 1975 for a replacement vehicle for Toronto's current street car.

By the end of 1973, OTDC had delivered 19 of its small buses to Toronto and Ottawa. The bus was initially designed for dial-a-bus service, but it should prove valuable for use in suburban areas and smaller communities as a fixed-route vehicle.

Ministry Expenditure by Highway

April 1, 1973 to March 31, 1974

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster - Windsor	\$ 9,600,478	\$ 1,762,307
2A	Hwy. 401 (MCF) - Hwy. 2 (Toronto)	192,649	—
3	Fort Erie - Windsor	1,128,285	1,756,420
4	Port Stanley - Flesherton	1,735,740	962,665
5	Toronto - Paris	1,772,452	542,138
6	Hwy. 24 - Tobermory	1,116,567	1,162,469
7	Ottawa - Sarnia	6,457,130	3,131,136
7A	Hwy. 115 - Hwy. 12 (Manchester)		127,897
7B	Peterborough - Chemong Corners	319,245	3,552
8	Winona - Goderich	153,007	891,810
9	Hwy. 11 - Kincardine	54,048	923,620
10	Port Credit - Owen Sound	798,570	833,938
11	Toronto - Rainy River	8,519,582	4,740,390
11B	At New Liskeard	1,864	31,431
12	Whitby - Midland (7)	372,385	494,732
14	Bloomfield - Marmora	269,415	160,538
15	Kingston - Ottawa	516,996	267,197
16	Johnstown - Ottawa	132,227	285,663
17	Quebec Boundary - Manitoba Boundary	9,277,118	4,769,964
17B	At North Bay	42,259	2,623
18	Leamington - Windsor	1,874,342	132,296
18A	Kingsville - Hwy. 18	87,230	55,423
19	Port Burwell - Tralee	349,037	593,498
20	Niagara Falls - Hamilton	1,652,632	282,148
21	Hwy. 3 (Morpeth) - Owen Sound	978,231	727,839
22	London - Hwy. 7	3,120	122,147
23	Hwy. 7 - Hwy. 9 (Teviotdale)	11,823	224,566
24	Hwy. 59 - Collingwood	329,431	620,365
24A	Paris - Galt	—	49,181
25	Oakville - Hwy. 89	1,017,742	142,358
26	Barrie - Owen Sound	1,044,130	310,417
27	Toronto - Penetanguishene	2,889,480	453,654
28	Port Hope - Bancroft	1,158,485	349,768
29	Brockville - Arnprior (15)	124,711	178,165
30	Brighton - Havelock	21,197	107,520
31	Morrisburg - Ottawa	651,866	189,298
32	Gananoque - Hwy. 15	—	36,367
33	Kingston - Stirling	1,304,195	269,620
34	Hwy. 2 (Lancaster) - Hawkesbury	680,329	124,162
35	Hwy. 401 - (Newcastle) - Dwight	1,342,296	730,786
36	Burleigh Falls - Lindsay	169,020	131,415
37	Belleville - Hwy. 7 (Actinolite)	87,347	98,518

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
38	Kingston - Hwy. 7 (N. of Sharbot Lake)	153,620	158,991
40	Blenheim - Sarnia	1,070,943	217,754
41	Napanee - Pembroke	1,405,826	401,234
42	Brockville - Westport (29)	446,363	97,384
43	Alexandria - Perth	787,641	314,250
44	Hwy. 17 - Hwy. 29 (Almonte)	1,253	28,041
45	Cobourg - Norwood	775,988	115,660
46	Hwy. 7 (E. of Manilla) - Coboconk	1,196	84,332
47	Hwy. 48 (N. of Hwy. 7) - E. of Hwys. 7 & 12	16,491	122,803
48	Toronto - Hwy. 46 (Bolsover)	1,260,603	374,956
49	Pictou - Hwy. 2 (W. of Deseronto)	16,629	57,618
50	Toronto - Hwy. 9 (N. of Palgrave)	110,315	146,486
51	Rondeau Provincial Park - Jct. Hwy. 3	7,301	9,862
52	N. of Hwy. 97 S. - Hwy. 2	206,683	70,786
53	Hamilton - Hwy. 2 (Eastwood)	964	173,570
54	Cayuga - Cainsville	40,193	169,601
55	Jct. Hwy. 8 - Niagara	210	72,974
56	Jct. Hwy. 3 - Jct. Hwys. 53 & 20	100,400	85,213
58	Port Colborne - St. Catharines	306,531	326,088
59	Long Point - Hwy. 3 (E. of Tillsonburg)	60,723	539,293
60	Hwy. 17 (W. of Renfrew - Huntsville)	2,116,232	476,833
61	International Border - Thunder Bay	127,798	104,644
62	Hwy. 14 (N. of Belleville) - Pembroke	180,925	518,537
63	North Bay - Quebec Boundary	52,311	152,885
64	Sturgeon Falls - Hwy. 11	609,536	298,842
65	Quebec Boundary - Matachewan	1,797,666	236,389
66	Quebec Boundary - Hwy. 65	301,982	160,617
67	Iroquois Falls - Hwy. 101	4,808	119,828
68	Hwy. 17 (Espanola) - South Baymouth	562,297	260,942
69	Hwy. 12 (N. of Brechin) - Capreol	4,034,170	743,864
70	Springmount - Hepworth		35,127
71	Fort Frances - Hwy. 17 (E. of Kenora)	1,730,162	202,849
72	Hwy. 17 (Dinorwic) - Sioux Lookout		182,571
73	Port Bruce - Dorchester	11,106	87,218
74	Hwy. 3 (New Sarum) - Nilestown	920	51,443
75	Prop Hwy. - Canboro - Bismarck	11,000	-
76	Hwy. 3 (Eagle) - Hwy. 2	95,717	34,411
77	Leamington - Hwy. 401 (N. of Comber)	14,739	40,720
78	Hwy. 21 (Dresden) - Wallaceburg		26,342
79	Hwy. 2 (Bothwell) - Hwy. 7	25,889	102,766
80	Hwy. 2 (S. of Glencoe) - Courtright	15,917	138,423
81	Delaware - Grand Bend	638,547	148,082
82	Hwy. 7 (Thedford) - Hwy. 21	19,357	24,836
83	Hwy. 23 (Russeldale) - Hwy. 21	5,567	73,118
84	Hensall - St. Joseph	142	32,958

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
85	Kitchener - Elmira	96,516	37,803
86	Guelph - Amberley	88,318	601,457
87	Harriston - Hwy. 86 (Bluevale)	57,957	211,251
88	Bradford - Hwy. 27 (Bond Head)	—	25,486
89	Hwy. 400 - Hwy. 23 (E. of Palmerston)	140,994	780,384
90	Barrie - Angus	3,911	54,516
91	Stayner - Duntroon	—	21,879
92	Elmvale - Wasaga Beach	6,576	43,904
93	Hwy. 11 (E. of Barrie) - Waverley	3,602	94,829
94	Callander - Hwy. 17 (S. of North Bay)	—	28,067
95	Hornes Point - Wolfe Island	51,063	25,534
96	Quebec Head - W. End of Wolfe Island	34,511	81,156
97	Hwy. 6 (Freelton - Hickson)	11,023	226,392
99	Dundas - Hwy. 24 (N. of Brantford)	855,374	87,795
101	Quebec Boundary - Hwy. 17 (Wawa)	472,398	755,479
102	Thunder Bay - Sistonens Corners	134,002	56,320
103	Port Severn - Hwy. 69	8,643	122,038
104	Hwy. 9 - Grand Valley	—	7,103
105	Hwy. 17 - Red Lake	955,142	242,803
106	Hwy. 28 (Dale) - Hwy. 2 (Welcome)	8,366	11,927
108	Hwy. 17 - Hwy. 639 (Quirke Lake)	161	84,263
112	Hwy. 11 - Hwy. 66 (Swastika)	359,955	47,531
115	Newcastle - Peterborough	2,827	86,545
116	Hwy. 72 (Patricia) - Hudson	—	22,345
118	Dorset - Hwy. 69	906,772	188,365
119	Hwy. 17 (Dryden) - Richan	—	31,430
121	Hwy. 28 - Hwy. 35 (S. of Fenlon Falls)	87,755	254,041
122	QEW (Oakville) - QEW (N. of Clarkson)	28,750	—
123	Hwy. 11 - North Bay Airport	—	1,086
124	Sundridge - Parry Sound	716,452	205,047
125	Hwy. 105 - Red Lake	348,482	21,025
126	Hwy. 401 - Hwy. 2 (London)	4,157	31,467
127	Maynooth - Hwy. 60 (E. of Whitney)	744	72,663
128	Kenora - Redditt	39,145	49,548
129	Thessalon - Chapleau	826,644	475,224
130	Port Arthur - Hwy. 61	871	43,934
132	Renfrew - Hwy. 41	136,149	68,516
133	Hwy. 33 (Millhaven) - Hwy. 401	—	19,447
135	Hwy. 401 - Hwy. 2 (London)	5,333	17,682
136	Hwy. 24 - Orangeville	—	31,355
137	Hwy. 401 - Thousand Islands Bridge	2,351	14,713
138	Cornwall - Monkland	41,001	73,897
140	Hwy. 3 (Port Colborne) - Hwy. 20	37,367	84,991
144	Sudbury - Hwy. 101	286,822	536,254
400	Toronto - Hwy. 12 (Coldwater)	844,423	1,166,670

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
401	(MCF) Quebec Boundary - Windsor	15,202,432	5,967,978
402	Hwy. 7 - Blue Water Bridge	2,624,446	32,280
403	Burlington - Brantford	2,648,958	481,931
404	Toronto - Hwys. 7 & 12	9,223,848	—
405	QEW - International Bridge (Queenston)	34	102,579
406	Hwys. 20 - 58 - QEW	28,811	65,957
407	Hwy. 35 & 115 - Hwy. 27	7,971,226	—
409	Belfield Expressway, Hwy. 401 - Int'l Airport	6,002,933	—
410	Hwy. 401 - Hwy. 7 (Brampton)	90,198	—
416	Johnstown - Ottawa	381,397	—
417	Quebec Boundary - Ottawa	18,415,988	189,591
420	QEW - Rainbow Bridge (Niagara Falls)	1,098,528	—
427	QEW - Hwy. 401	4,145,900	388,327
451	QEW, Toronto - Fort Erie	22,570,179	2,079,624
458	Ottawa - Queensway	1,700,574	280,353

SECONDARY HIGHWAYS

500	Denbigh - Bancroft	28,539	110,064
502	Napanee - Marysville	135,456	22,845
503	Tory Hill - Kirkfield	140,761	209,493
504	Hwy. 620 - Apsley	—	70,164
505	Hwy. 46 - Uphill	4,329	30,512
506	Plevna - Hwy. 41	—	88,693
507	Hwy. 28 (Lakefield) - Hwy. 503	99,672	137,266
508	Barnstown - Black Donald Mines	—	55,393
509	Hwy. 7 - Snow Road Station	—	52,562
510	Magnetawan - Hwy. 124	—	37,244
511	Brightside - Hwy. 508	124,870	57,012
512	Eganville - Hwy. 60	8,232	94,078
513	Hwy. 132 - East of Hyndford	—	33,506
515	Hwy. 512 - Combermere	80,312	82,717
517	Twp. Road (near New Carlow) - Hwy. 62	—	27,590
518	Sand Lake - Hwy. 69	354,153	257,814
519	Hwy. 121 - Redstone Lake	105,097	107,290
520	Burk's Falls - Ardbeg	266,330	127,323
522	Hwy. 11 - West of Loring	1,455	326,768
523	Lyell Twp. Line - Hwy. 60	75,337	46,771
524	Hwy. 522 - Hwy. 534 (E. of Restoule)	29,070	13,276
526	Hwy. 69 - W. of Britt	35,492	12,459
528	Wolseley Bay - Hwy. 64	27,157	41,857
528A	Pine Cove Landing - Hwy. 528	—	14,531

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
529	Hwy. 69 - Hwy. 69 (Magnetawan River)		50,882
529A	Hwy. 529 - Bayfield Wharf		16,250
530	Hwy. 519 - Hwy. 35 (Carnarvon)	—	45,828
531	Bonfield - Hwy. 17	—	8,668
532	Hwy. 11 (S. of Bracebridge) - Hwy. 69	142,862	161,487
533	Mattawa - Hwy. 63	6,398	107,455
534	Powassan - Restoule	99,631	100,671
535	Hwy. 64 - Riviere Veuve	9,287	131,770
536	Hwy. 17 - Creighton	126	12,316
537	Hwy. 69 - Hwy. 17 (Wahnapiatae)	75,434	57,577
538	Algoma Mines Loop	—	11,004
539	Hwy. 64 - Warren	148,439	97,833
539A	Hwy. 539 - Tertiary Road 805	—	10,232
540	Little Current - Meldrum Bay	270,687	359,595
540A	Hwy. 540 - Barrie Island		12,200
540B	Gore Bay - Hwy. 540	103	15,130
541	Sudbury - Skead	812,080	54,457
541A	Falcon Bridge - Hwy. 541		6,157
542	Hwy. 68 - Gore Bay	151,875	197,741
542A	Hwy. 542 - Tehkummah		7,319
543	Long Lake - Sudbury		18,149
544	Levack - Hwy. 144		5,510
545	Hwy. 541 - Milnet	387,279	53,476
546	Hwy 17 - Mississagi Provincial Park	32,811	154,728
547	Hwy. 101 - Hawk Jct.	—	10,677
548	Hilton Beach - Hwy. 17	630,670	134,125
549	Lake Panache - Hwy. 17	94,406	44,860
550	Sault St. Marie - Gross Cap	26,429	18,263
551	Province Bay - Hwy. 540	36,197	68,516
552	Hwy. 556 - Twp. Road (E. of Hwy. 17)	122,624	50,981
552A	Hwy. 552 - Hwy. 17	—	2,810
553	Massey - Richie Falls Camp	8,263	164,401
554	Hwy. 546 - Hwy. 129	153,804	32,742
555	Magog Lake - Hwy. 557	—	34,790
556	Hwy. 17 (Heyden) N. Easterly	510,068	86,661
557	Blind River Northerly	181,557	65,587
558	Haileybury - Montreal River	35,782	42,656
559	Hwy. 69 Nobel - Hwy. 69	—	80,526
560	Hwy. 11 - Hwy. 144 (S. of Gogama)	345,199	374,066
560A	Westree - Hwy. 560	—	16,231
561	Bruce Mines - Hwy. 638	4,000	43,888
562	Hwy. 11 (E. of Thornloe) - Hwy. 65	—	22,103
563	Batchawana - Hwy. 17	—	9,553

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
564	Blanche River Bridge - Hwy. 112	3,637	17,256
565	Pte. Aux Pins - Hwy. 550	—	2,810
566	Matachewan - Ashley Mine	45,638	43,030
567	E. of Silver Centre - N. Cobalt	1,287	58,392
568	Hwy 11 - Kenogami	—	3,812
569	Hwy. 11 - Hwy. 11 (S. of Englehart)	179	42,979
570	Sesekinika - Hwy. 11	—	4,666
571	Hwy. 562 - Earlton	—	8,841
572	Hwy. 11 (Ramore) - Hwy. 101	37,219	26,668
573	Charlton - Hwy. 11	3,993	69,185
574	Cochrane - Norembega	2,690	49,957
576	Hwy. 101 - Kam-Kotia Mine	—	38,067
577	Hwy. 101 - Iroquois Falls	124,538	45,599
578	Iroquois Falls - Hwy. 11	2,889	16,030
579	Cochrane - Gardiner	—	59,908
580	Hwy. 11 - Lake Nipigon	—	18,318
581	Hwy 11 - Remi Lake	—	8,291
582	Hurkett - Hwy. 17	—	21,504
583	Mead - Lac Ste. Therese	170,043	76,595
584	Hardrock Mine - Nakina	116,887	176,157
585	Hwy. 11 - Pine Portage	—	64,556
586	Hwy. 11 - Lower Shebandowan Lake	—	6,574
587	Silver Islet - Hwys. 11 & 17	—	82,905
588	Stanley - Round Lake Road	46,132	88,755
589	Hwys. 11A & 17A - Dog Lake Road	228,472	56,372
590	Hwy. 130 - Hwy. 588 (Nolalu)	160,588	70,057
591	Hwy. 589 Northerly	—	12,629
592	Hwy. 11 (Novar) - Hwy. 11	—	50,372
593	Hwy. 61 - Hwy. 588 (Nolalu)	31,563	84,714
594	Dryden - Hwy. 17	95,760	51,200
595	Hwy. 597 - Hwy. 590	100,214	63,804
596	Kenora - N. of Minaki	360,856	69,009
597	Pardee - Hwy. 608	37,713	14,988
598	Hwy. 604 - Hwy. 128 (N of Kenora)	—	6,863
599	Ignace - Tertiary Road 808	1,251,300	372,286
600	Hwy. 71 - Rainy River	17,000	146,621
601	Hwy. 17 - Dryden	50,593	32,092
602	Fort Frances - Emo	52,557	57,910
603	Hwy. 17 - Dymont	—	5,847
604	Hwy. 17 - Kenora Airport	128,176	13,449
605	Hwy. 17 - Rugby Lake	7,791	18,957
606	Hwy. 17 - Markstay	24,798	3,241
607	Hwy. 69 (Big Wood) - Hwy. 64	1,277	25,271
607A	French River - Hwy. 607	—	6,580

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
608	Hwy. 61 - Hwy. 595 (S. Gillies)	32,455	23,122
609	Hwy. 105 - Clay Lake	—	27,324
610	Hwy. 67 - Hwy. 101 (Hoyle)	19,613	37,892
611	Hwy. 602 (Sherwood) Northerly	—	35,626
612	Hwy. 103 (Mactier) - Hwy. 69	—	29,732
613	Hwy. 602 - Lake Despair	124,600	56,747
614	Hwy. 17 - Manitouwadge	—	102,276
615	Hwy. 17 - Burditt Lake	52,109	27,999
616	Hwy. 101 - Palomar	—	4,911
617	Hwy. 11 (Stratton) - Hwy. 600	11,764	39,538
618	Red Lake - Madsen	39,029	18,022
619	Hwy. 11 (Pinewood) - Hwy. 621	1,066	70,353
620	Hwy. 62 - Hwy. 28 (Apsley)	164,724	77,560
620A	Hwy. 62 - Hwy. 28	—	862
621	Hwy. 11 - Lake of the Woods	60,537	65,121
622	Hwy. 11 (Atikokan) Northerly	6,031	13,761
623	Hwy. 11 - Sapawe	—	5,609
624	Hwy. 11 - Larder Lake	8,057	63,609
625	Caramat - Hwy. 11	—	52,517
626	Matheson - Porquis Jct.	—	54,153
627	Heron Bay - Hwy. 17	—	14,611
628	Red Rock - Hwys. 11 & 17	—	10,568
629	Timmins - Timmins Airport	16,008	15,472
630	Kiosk - Hwy. 17	227,875	70,445
631	South of Hornepayne - Hwy. 11	259,008	295,350
632	Hwy. 118 - Rosseau	—	34,480
633	Hwy. 11 - Kawene	—	6,704
634	Val Caron - Hwy. 144	6,058	36,298
635	Hwy. 17 - Ottawa River Bridge	608	5,437
636	Hwy. 11 - Frederick House	—	8,028
637	Hwy. 69 - Killarney	133,331	226,425
638	Dunns Valley - Echo Bay	395,305	79,539
639	Hwy. 108 - Hwy. 546	—	46,344
640	Hwy. 571 - Earlton Airport Entrance	—	4,175
641	Hwy. 17 (Pellatt)	—	30,006
642	Alcona - Sioux Lookout	599,933	32,361
643	Hwy. 584 - Twp. Road to Cavell	60,802	48,283
644	Hwy. 69 (Pte. au Baril) Easterly	—	3,251
645	Hwy. 529 - Bing Inlet	—	13,542
646	Pickle Crow-Central Patricia	530	9,342
647	Hwy. 17 - Blue Lake Provincial Park	502cr.	11,187
648	Dyno Mine - West Jct. Hwy. 121	16,668	79,729
649	Bobcaygeon - Hwy. 121	—	36,698
650	O.N.R. Right-of-Way - Hwy. 112	128,244	11,543

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

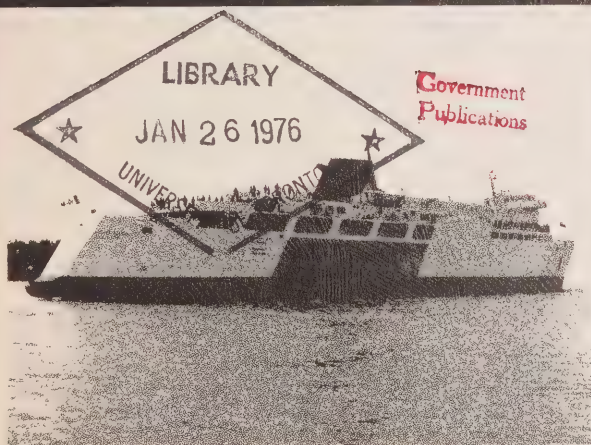
HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
651	Hwy. 101 - Missanabie	161,617	113,692
652	Wade Lake - Hwy.574	—	28,824
653	Portage Du Forte Bridge - Hwy. 17	91,576	20,301
654	Hwy. 11 - Nipissing	99,604	46,782
655	Timmins - Ward Kidd Twp. Boundary	—	32,910
656	Hwy 533 Northerly	—	5,565
657	Gold Pines - Hwy. 105	—	7,761
658	Hwy. 17 - Fairbank Provincial Park	576	66,086
659	Hwy. 604 - Hwy. 128	—	36,772
660	Bala - Hwy. 103	8,259	43,349
661	Gogama - Hwy. 144	—	8,351
663	Hwy. 11 (W. of Hearst) Northerly	14,466	9,121

TERTIARY ROADS

800	Hwys. 11 & 17 - Cheeseman Lake	240,889	103,353
801	Hwy. 11 - Namewaninkan River	—	5,011
802	Hwy. 11 - Burchell Lake	—	8,570
803	Hwy. 575	—	5,947
804	Hwy. 105 - Lower Manitow Falls	—	7,737
805	Hwy. 539A (River Valley) - Pond Lake	99,467	58,174
806	Hwy. 545 - Sellwood	—	9,851
807	Smooth Rock Falls - Fraserdale	—	137,664
808	Hwy. 646 - Otonkwin River	4,822	43,824
809	From Hwy. 564 to end of Hwy.	—	6,343

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ANNUAL REPORT

For the fiscal year ending March 31, 1975



Ontario

Ministry of
Transportation and
Communications



Office of the
Minister

Ministry of
Transportation &
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

TO THE HONOURABLE PAULINE M. MCGIBBON, O.C.,
B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before
you the Annual Report for the Ministry of
Transportation and Communications for the fiscal
year ending March 31, 1975.

Respectfully submitted

A handwritten signature in dark ink, appearing to read "John R. Rhodes".

John R. Rhodes,
Minister.



Office of the
Deputy Minister

Ministry of
Transportation &
Communications

416/248-3604

East Building
Downsview Ontario

TO THE HONOURABLE JOHN R. RHODES,
Minister of Transportation and Communications, Ontario.

Sir:

I have the honour to present the report of the
activities of the Ministry of Transportation
and Communications for the fiscal year ending
March 31, 1975.

Respectfully submitted

Harold Gilbert
Harold Gilbert
Deputy Minister.

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DEPUTY MINISTER'S SUMMARY

The role of the Ministry of Transportation and Communications is to provide the residents of Ontario with a balanced and integrated transportation system and the best possible telecommunication services.

It is not a new role for the Ministry but for the past several years there has been a decidedly fresh approach in determining the direction and scope of each year's program.

The key to the new approach has been to establish and meet more specifically the transportation and communication needs of the people of Ontario. It has involved considerable more contact with the people to determine these needs and how they can best be met.

Because of the size and complexity of the province, varying from the densely populated south to the small and scattered communities of the north, the basic needs of the residents have to be met in different ways.

It has meant the development and expansion of a number of services — such as highway construction and maintenance — which have been part of the Ministry's program for many years. But it has also meant moving more prominently into other areas such as transit and air services.

During the past year, the Ministry has continued its program of establishing and meeting these specific needs.

Highways continue to be the basic and most effective means of transportation and a concentrated program of construction and maintenance continues on the King's Highways.

During the past year, \$296,458,337 was spent on construction and \$114,696,723 on maintenance.

As an integral part of the highway system, ferry services were improved primarily with the addition of a new ferry, the "Chi-Cheemaun", on the Tobermory-South Baymouth run and the start of construction of a new ferry for service between Kingston and Wolfe Island.

The Ministry also continued its extensive research and development program to ensure that the best possible methods and materials will be used in the construction and maintenance of the highway system.

The regulation and control of the province's 3.9 million drivers and 3.7 million motor vehicles is also a continuing concern of the Ministry. A number of programs were initiated to ensure that all drivers are as qualified as possible and all vehicles are in safe operating condition.

Two mechanical fitness programs initiated during the year include the mandatory inspection of used vehicles prior to resale and an intensified inspection program of commercial vehicles.

To ensure the equitable distribution of the services provided by the Drivers and Vehicles Division, regionalization was started in 1973 and completed in 1974. There are now five administrative regions, three in southern Ontario and two in northern Ontario.

Paralleling its highway and highway-related programs, the Ministry has continued

its promotion of better transit facilities in all urban areas of the province.

A great deal has been accomplished through close co-operation with municipalities to improve transit facilities by means of a subsidy program which has now reached close to \$100 million a year.

One of the notable developments was the creation of the Toronto Area Transit Operating Authority in June, 1974 to co-ordinate transit facilities for the more than 100,000 commuters who travel daily into the Toronto area across several regional boundaries.

TATOA also assumed responsibility for the GO Transit system which recorded a growth of 15 per cent in 1974, averaging 25,000 passengers a day on the GO Trains and 14,000 a day on the GO Buses.

The first new GO Train route to be inaugurated in addition to the Lakeshore run was the Northwest service between Toronto and Georgetown which started in April, 1974.

Dial-A-Bus and the new Trans-Cab system, which was started in Peterborough in May, 1974, are both continuing to function well as public transportation systems in low density areas.

The Ontario Transportation Development Corporation, which was formed in 1973 to establish a major transit manufacturing industry in Ontario, has had considerable success in developing a modern light-rail vehicle and a small bus suitable for Dial-A-Bus operations.

In addition, the Ministry is also continuing to meet the North's special needs for increased air services. Subsidies have been provided to

municipalities to up-grade airport facilities and the construction of airstrips in remote northern communities has continued.

But the major emphasis has been on the planning program for the expansion of norOntair into both central and northwestern Ontario in 1975. The Government's air commuter service, which started by serving four communities in northeastern Ontario in the Fall of 1971, will serve 17 communities all across the north when the expansion program is complete.

norOntair is administered by the Ontario Northland Transportation Commission which is also responsible for the development and operation of a wide variety of transportation and communication services in northeastern Ontario including rail, bus, delivery, ferry and telephone services.

Also in the North, the Communications Division is continuing work on a program which will eventually supply reliable telephone service to all remote northern communities.

The following is a summary of expenditures reported by the Financial Comptroller for the fiscal year 1974-75 with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	March 31, 1974	March 31, 1975
Ministry Administration	\$ 31,660,085	\$ 32,080,605
Maintenance	94,881,263	114,696,723
Construction	261,154,796	296,458,337
Municipal Subsidies	266,098,241	329,119,375
Public Operations	20,769,853	20,382,643
Safety and Regulation	15,761,116	19,193,550
Ontario Seasonal Employment	347,513	—
TOTAL GROSS EXPENDITURE	\$ 690,672,867	\$ 811,931,233

DEPUTY MINISTER'S OFFICE

COMMUNICATIONS DIVISION

The communications goal of the Government of Ontario is to ensure that the diverse interests of the people of Ontario are fully represented in the developments associated with radio and television broadcasting, educational broadcasting, cable and special purpose video, data transmission systems, telephone and telegraph services and the use of the communications satellite.

The Communications Division is responsible for developing and administering a communications policy which responds to the communications goals of the Government of Ontario.

During the fiscal year, the Communications Division continued to pursue its objectives:

- development of the Ontario communications policy;
- introduction of amendments to the Ministry of Transportation and Communications Act to outline the communications goals and responsibilities of the province;
- negotiations on communications policy with the federal government;
- participated in the Conference of Provincial Communications Ministers in Victoria, British Columbia, May 27th and 28th, 1974, and hosted the Conference of Provincial Communications Ministers in Toronto, September 30th and October 1st, 1974;
- developed improved working relationships with the telecommunications common carriers, broadcasting and cable industries and the electronics manufacturing industry.
- represented the province in interventions before the Telecommunications Committee of the Canadian Transport Commission in rate applications by Bell Canada and CN/CP Telecommunications;
- represented the province before the Canadian Radio Television Commission related to cable and broadcast policy matters;
- participated in the Telecommunications Cost Inquiry, a complex financial and economic analysis of the structure of the Canadian Telecommunications carrier industry undertaken by the Canadian Transport Commission;
- proceeded with Bell Canada to begin construction of a joint project to provide basic reliable telecommunications services in the remote areas of northwestern Ontario and with Ontario Northland Transportation Commission to improve service to communities along the coasts of James and Hudson Bays.
- assisted in the reorganization and relocation of the Ontario Telephone Service Commission;
- provided financial, technical, legal and economic support to the Ontario

Telephone Service Commission in its regulatory activities and direct assistance to the 40 independent telephone companies regulated by the Commission;

The Communications Division is comprised of two branches, Policy Development and Telecommunications Common Carriers and two offices, Telecommunications Systems Engineering Office and an office dealing with administrative matters. The division, with a complement of 53, reports to the Deputy Minister.

PRIORITY DEVELOPMENT BRANCH

This branch is responsible for the development and management of current and long-range capital construction programs of the Ministry, and for ensuring maximum effectiveness of the legislated funds to be expended. Long-range programs for proposed transportation systems are being developed by the implementation of a priority methodology which analyses and recommends viable programs within financial and planning period limits.

The Advance Program consisted of 2,904 projects at the end of the fiscal year; of these, 543 projects were added during the year. Approximately 1,080 groups of projects had active pre-engineering schedules. During the

year, 156 contracts were awarded. An additional 16 contracts were advertised, of which 13 were non-awarded and three cancelled during the advertising period.

LEGAL BRANCH

The Legal Branch is a law office within the Ministry which provides legal services to the Minister and Ministry staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to this Ministry. They are located at Downsview, Queen's Park with Drivers and Vehicles, and at each of the regions with the exception of the Northwestern Region.

The branch provides legal advice on all aspects of the Ministry's programs and prepares the legal documentation through which such programs are carried out. The branch advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes which the Ministry administers. Legal Branch counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact.

The Insurance and Claims Section administers the insurance policies held by the Ministry and processes the claims with which the Ministry becomes involved each year.

PLANNING AND DESIGN

DESIGN DIVISION

The Design Division is responsible for policy and procedures covering the design and traffic operations of all Ministry transportation projects. It consists of two branches: Systems Design and Engineering Services; and the Traffic Control Office.

SYSTEMS DESIGN BRANCH

This branch ensures that design policy, methodology and standards are feasible and progressive for regions to execute design programs in an efficient and economical manner. It also monitors the application and benefits of such policies and standards and provides specialized design components only in those disciplines where sufficient workload, technical development or staff capabilities are not available to regions.

An internal organizational study resulted in the branch being restructured to consist of the Analysis Office and the Policy and Procedures Office.

Policy and Procedures Office

Within this office, the Geometric Standards Section is responsible to provide the regions with geometric design standards, policies and tools. The Physical Standards Section is responsible for the setting and implementation of minimum and cost effective standards for design, construction and manufactured products. The Drainage Section ensures that drainage policies, methodologies and standards are feasible and progressive.

The Environmental and Metric Standards Section is responsible for the development of design standards, aids, guidelines and techniques related to the design of safe, efficient, economical transportation systems and the fulfillment of environmental requirements, and to develop metric highway engineering standards and criteria.

Analysis Office

Within this office, the Design Analysis Section is responsible for monitoring the regional planning and design process and for providing Head Office Systems Design input into the development of regional project design concepts. The Contract Review Section reviewed 180 projects for accuracy and conformity to current policy.

The Electrical Design Section recommends policies and establishes procedures for design, specifications and contractual methods for illumination, traffic signals and other electrical work. This section was involved in 342 projects during the year.

The co-ordination of the new ferry service which commenced in September, 1974 between Tobermory and South Baymouth was administered by the branch.

ENGINEERING SERVICES BRANCH

This new branch made up of four offices — Engineering Plans, Geotechnical, Laboratory Services and Structural — completed its first full fiscal year of operation

after initial conception in January, 1974. Its function is to establish design policies and procedures, to monitor their application and benefits, and to provide a variety of design testing services.

Engineering Plans Office

During the year the Engineering Plans Office updated 238 highway strip plans; prepared 22 new strip plans; established 1,642 horizontal control monuments and 503 precise bench marks; and by photogrammetric methods, 271 miles of plans at various scales including 52 miles in metric were drawn up and 38 miles of preliminary cross sections plotted. Geographical referencing of Ontario continued (10 square kilometers), and a new edition of the official Ontario road map was produced and 30 larger scale maps were prepared.

Remote sensing techniques were used to evaluate 350 structure sites for possible emergency detour purposes; to analyze 50 sites for pavement skid resistance; and to analyze 13,082 square miles to determine geotechnical information and locate potential natural aggregate deposits.

Geotechnical Office

The Geotechnical Office produced 136 strip maps showing aggregate deposits for construction contract purposes; initiated trials involving lime stabilization of leda clays and waterproofing of concrete pavements; reviewed 157 Soils Design Reports; completed 21 investigations for river crossings on the highway system and 56 on the municipal system and made progress in the development of new hydrologic methods. Foundation investigations for proposed structures totalled 110 and 28 investigations were completed for specific instruction and maintenance problems.

Laboratory Services Office

In the Laboratory Services Office testing and inspection services related to asphalt, concrete, soils, aggregates, metals and chemical products for suitability and compliance with specifications were continued. Non-routine highlights involved technical expertise in the design and equipping of three new regional laboratories;

investigational and development work on fast drying traffic paint; and specification preparation for GO Transit tunnel coatings, admixtures used in concrete and elastomeric bridge bearings.

Structural Office

The Structural Office completed contract documents for 47 highway structures, 10 bridge deck waterproofing projects, 98 overhead sign supports and special design culverts and 11 detailed preliminary plans. Supervision was also provided for 12 structures designed by consultants.

The Municipal Section examined plans for 105 preliminary structures, 148 final bridges, 139 culverts and 63 miscellaneous items. Inspection was made on 387 old structures and repairs and/or load restrictions recommended for 170.

International recognition was given by the Prestressed Concrete Institute when they selected the high level bridge at the QEW and Highway 420 interchange at Niagara Falls for an "Award of Merit".

Process and Product Improvement continued within each Office and involved such things as:

- Development of a Culvert Handbook and Structural Standards Manual.
- Study to improve dust and fume evacuation in the laboratories.
- Cost benefits of high pressure sodium versus clear mercury luminaires.
- In-house Aggregate Study.
- Evaluation of pile-driving records.
- Pavement Management Feedback and Information System (PAMFIS)
- Data processing development projects.

Traffic Control Office

The Traffic Control Office is responsible for setting policy and procedures applicable to traffic control devices, and also provides a

variety of services to other branches and offices, such as, data collection, subsidy approvals, sign designs, and improved systems design operational warrants.

In the Traffic Analysis Section five urban traffic operational studies were completed with another two to be completed earlier in 1975-76. Two new studies were initiated.

Over 61,300 roadside interviews were conducted in a number of areas across the province.

In Traffic Control Development 18 projects were completed in pursuit of the goal of developing new devices and techniques for operational improvements of highways. There are 43 additional projects underway or being considered.

In co-operation with other branches, a new computerized collision retrieval system was brought into partial production.

The design of a Freeway Surveillance and Control System for a portion of the Queen Elizabeth Way through the City of Mississauga was completed. Material has been ordered and installation is under way. Television cameras, vehicle detectors in the roadway and traffic signals on interchange ramps will be used to control and improve the flow of traffic on this section of the QEW.

In keeping with the trend toward the use of more symbols in traffic signs, several symbol signs were selected for adoption by the Traffic Signing Section during this past year, i.e., No Parking; Food, Fuel, Accommodation, Airport; and Passing Lane. A new policy where by larger signs will be erected on certain major highways was also developed.

In the devices area, the need for illumination in 120 projects was reviewed by the Traffic Devices Section. New traffic signal installation, or revisions to the existing signal installations, were approved at 101 locations on the King's Highway system, and 569 locations on municipal roads. Staff also participated in computer based traffic signal studies in three cities.

PLANNING DIVISION

The role of the Planning Division in the Ministry is to prepare long and short-term transportation plans for regional and urban areas of Ontario. These transportation plans cover all modes and provide leadership and guidance to all municipalities.

These responsibilities are shared by the Systems Planning Branch, the Project Planning Branch and the Economic Policy Office.

SYSTEMS PLANNING BRANCH

The responsibilities of this branch are as follows:

- To evaluate and recommend policy positions on the standards of service for the transportation program of the Ministry and develop the information gathering system to apply these standards.
- To forecast future demand for transportation service.
- To evaluate and recommend policy positions on the objectives and level of investment for each program in relation to past performance; physical and operating conditions, existing and forecast; social, economic and technological change; and provincial goals.
- To develop solutions to specific transportation problems of an intermodal or interjurisdictional nature.
- To evaluate the transportation impacts of provincial development goals and specific development objectives.

Brief summaries of activities of the three offices engaged in this work are given below:

Regional Transportation Planning Office

This office supports the programs of this Ministry and those of other Ministries and agencies by carrying out long and short-term

studies on the multi-modal transportation systems throughout Ontario.

To facilitate operations the office was organized, early in the fiscal year, into four separate sections each specializing in particular economic planning regions of the province. Activities performed by the sections are outlined below.

Central Ontario-East — Efforts were directed towards assembling data and information to develop trip tables and road networks for the study of needs in the Central Ontario Lakeshore Urban Complex. Investigations into airports and access requirements, and regional and recreational transportation continued.

Central Ontario-West — A long-range transportation study covering Brant County and the regional municipalities of Niagara, Hamilton-Wentworth and Haldimand-Norfolk was the focus of activity in this group. Particular attention was given to the major industrial development and new towns in the Haldimand-Norfolk region.

Northeastern and Northwestern Ontario — The latest of the transportation studies were completed for northern Ontario. Technical reports were compiled for Sudbury-North Bay and Northeastern Ontario. In addition summary reports were issued for the Madawaska and Northeastern Ontario areas. Other work involved the development of preliminary transportation strategies for the remote northern portions of the province.

Southeastern and Southwestern Ontario — Updating of the transportation data base was commenced in order to allow a review of transportation plans for both these regions. Major emphasis was placed on intercity bus and rail passenger services between the urban centres in southern Ontario.

Systems Analysis Office

This new office combines the function of part of the former Systems Priorities Development Office and the former Systems Planning Services Office. During the past year the major activities of this office were:

The Systems Priority Development

Section has developed a methodology for comparison of the performance between Ministry programs, to be used as a guide for setting priorities for resource allocation between the programs. As part of this development an evaluation of the County and Regional Road Program was provided, and an investigation of the impact of the current energy situation in the Ministry programs has been started.

Transportation Characteristics continued to provide traffic volume information for the provincial road network based on traffic surveys and an extensive traffic counting program.

The Land Use Group has allocated land use data for the eastern and southwestern Ontario Planning Regions in addition to further refinement of the land use data provided for central Ontario. Land values associated with proposed highway improvements have been provided for use by the Priority Development Branch.

The Specific Studies Group has continued to respond to requests from the Regional Offices and Route Projects Planning Office for information relating to future traffic movements - by refining available transportation planning data.

The Reference and Information Systems Section replaces the old Data Bank Section. Emphasis is on keeping information to a minimum while at the same time satisfying all justified demands. A physical inventory system has been developed for King's, Secondary and Tertiary Highways in a format suitable to determine the construction needs of these highways. A new simplified linear reference system has been developed which will enable the compatible storage of all necessary data.

Computer Development Liaison has been active in new computer program development, and also in improved methods of documentation.

The Graphical Design Group continued to provide its services for the whole of the Planning Division.

Municipal Planning Office

This office administers transportation

planning and road needs studies for both Ministry and municipal purposes. Studies may include urban development alternatives, multi-modal transportation systems analysis, road needs with municipal financial objectives and jurisdictional reviews of transportation systems recommendations. The Metropolitan Toronto Plan Review has continued as a major part of the program.

Transportation planning studies of Regional York, Regional Durham, London and Oakville were carried out plus other municipalities. In addition a number of municipalities had road needs studies such as the regions of Durham, Halton, Peel, Hamilton-Wentworth and Waterloo as well as Ajax, Caledon, Elizabethtown, Kingston Township, Nickel Centre, Newcastle, Welland and Timmins.

This office also participated in the development of policy for such issues as railway relocation in urban areas, commuter rail systems analysis and a funding system for municipal roads.

PROJECT PLANNING BRANCH

This branch develops comprehensive planning of transportation corridors for all modes in the provincial transportation system, using as a base the broader planning framework developed by the Systems Planning Branch. This phase in the planning process studies the feasibility of various alternative transportation links, giving full consideration to the social, economic and environmental effects of each alternative on the area in addition to engineering and cost considerations.

Public participation is organized as a part of the planning process. Leadership and guidance is given to municipalities in the planning of public transportation and the development of new transportation concepts.

Studies and planning related to the environment play a big part in Ministry activities. Teams of specialists from this branch investigate all possible effects of Ministry projects on surrounding areas and its inhabitants. This includes consideration from conservation of landscape, forests, waterways and communities — assures, in short, that

while transportation facilities must be constructed where needed, they will be planned and built with the least possible disruption to people and the balance of nature.

Brief summaries of activities of the three offices engaged in this work are given below:

Environmental Office

The Land Management Section continued its review function of various land developments and land use proposals submitted from throughout the province recommending approvals, refusals or amendments in view of Ministry requirements. In addition, this section also develops and implements policy guidelines for the above program. The administration of land severances for this Ministry has recently been regionalized.

The Environmental Section continued its role of providing the environmental component at each stage in the planning and design processes, refining methods developed previously for the route project planning level as well as formalizing, intensifying and refining its involvement at the design level.

The office expanded its activities at the design level, by developing, presenting and implementing a program for the identification of work projects having potential environmental impacts in order that priorities could be set, workload of the environmental staff assessed, and staff assigned. To this end, all work projects on the Advance Program have been and are being screened for potential environmental impacts.

Staff are being assigned according to priority of the project and manpower availability, with an aim of minimizing the effect on the normal flow of design — construction activities. Staff were also engaged on a few construction projects with the objective of helping to define the environmental problems which arose and suggesting remedial actions to effect a solution or amelioration of such problems within an engineering-environmental dialogue exchange. The first step at formalizing the working relationships with the Operations Division was taken near year-end.

Route Projects Planning Office

This office is engaged in a continuing program of transportation and joint use corridor studies. Multi-discipline teams examine economic, sociological, engineering and environmental factors and, through public participation programs, determine the impacts on the communities involved. Between March 31, 1974 and March 31, 1975 the head office group has completed 20 studies and have 20 more in progress. The regional offices have completed three with 14 in progress.

Transit Projects Planning Office

Last year this office was known as the Operational Planning Office, but for clarity of purpose has been renamed. The office has continued its involvement with short term public transportation projects which have included monitoring of provincial transit assistance programs and the formulation of alternatives.

Within the field of ministerial responsibility the office maintains close relationships with the Municipal Transportation Branch, Municipal Planning Office, Toronto Area Transit Operating Authority and the Ontario Northland Transportation Commission.

The following programs are the responsibility of the office:

- Municipal transit financial assistance policies including formulation of alternatives for the physically handicapped;
- Municipal transit systems planning assistance under which 14 projects were completed;
- Municipal transit development and demonstration planning and analysis which includes north York Dial-A-Bus and six other experimental type projects distributed across the province;
- Provincial transit systems planning which

involves monitoring present GO Transit services and planning for new services such as those for Richmond Hill, Streetsville/Milton and Union Station Transportation Terminal;

- Airport and air services planning including policy formulation, remote north airport design, municipal airport standards and financial assistance and services planning and implementation assistance to ONTC for norOntair expansion into the northwest of the province.

Economic Policy Office

This Office is responsible for ensuring that the Ministry's transportation planning process utilizes the knowledge and capability of the private sector, and is in accord with the overall economic policy of the government. The following material summarizes the important activities of the office.

In the Transportation Pricing Studies Section, a study was initiated to investigate the movement of freight in the St. Lawrence corridor. Numerous requests for advice were received from small shippers to which we responded. An investigation of the pricing practices of the public passenger carriers was initiated.

In the Urban Studies Section, cartage licensing became a controversial topic. Consultants were retained to examine the situation and prepare recommendations on appropriate administrative and legal solutions. In response to federal government initiatives, a provincial position on National Transportation Policy was prepared.

The Modal Studies Section prepared a policy paper on the financing of ferry services which are used by the province's residents. Work continued on attempts to solve the freight movement problems in the Niagara Peninsula, and in the Windsor/Sarnia corridor. Impending business failures in the air and water sectors were examined to see whether any advice or assistance could be offered to the carriers involved.

OPERATIONS RESEARCH AND DEVELOPMENT

OPERATIONS DIVISION

CONSTRUCTION BRANCH

The Construction Branch is responsible for directing the construction program of the entire province, producing and revising specifications, preparing tender documents, monitoring quality control, approving contractor's shop and falsework drawings, controlling construction personnel, and directing the technical staff training program.

Following are a few of the many projects undertaken.

Southwestern Region — Chatham, London, Stratford and Owen Sound Districts.

On Highway 40, New, grading, drainage and structures were completed from Highway 80 southerly for 7.3 miles, and concrete paving commenced from Churchill Road in Sarnia southerly to Highway 80. Hot mix paving was completed on Highway 401 from the junction of Highway 3 easterly to interchange No. 6, a distance of 17.89 miles and also from interchange No. 28 easterly 10.8 miles in the Woodstock area.

On Highway 85 New in Waterloo, grading, drainage and structures were completed from 0.2 miles southeast of King Street, northerly 4.1 miles.

Central Region — Hamilton, Toronto and Port Hope Districts.

On the QEW, the Grimsby Interchange at Christie, Ontario and Maple Streets was completed, this work consisted of grading, drainage, hot mix paving, seven structures and lighting. Similarly, on the QEW, the Bartlett

Avenue Interchange, 1.1 miles east of Grimsby was completed.

Widening of the QEW from the Humber River westerly to east of Islington Avenue, a distance of 2.60 miles was completed, this work included the relocation of the Lion Monument.

On Highway 48, 5.2 miles of grading, drainage, granular base and hot mix paving was completed from 2.7 miles east of Sutton easterly, including the CNR overhead structure.

On Highway 121, grading, drainage granular base and hot mix paving was completed from Fenelon Falls northerly for 2 miles, and grading, drainage and granular base from that point northerly 5 miles.

Eastern Region — Kingston, Ottawa and Bancroft Districts.

On Highway 417, hot mix paving and structures were completed from 1.8 miles east of Prescott County Road 3A to Highway 17, and this 29-mile section was opened to traffic.

On Highway 15, grading, drainage, granular base and hot mix paving was completed, from 0.9 miles north of Highway 401, northerly 15 miles.

The new structure and approaches over the Petawawa River Bridge on Highway 17 was completed, replacing the old structure which was washed out during a heavy rain.

Grading, drainage, granular base and hot mix paving was completed on Highway 28 from Burleigh Falls northerly 15.8 miles.

Northern Region — Huntsville, Sudbury, North Bay and New Liskeard Districts

Widening of Highway 11 proceeded from 0.3 miles north of Highway 117, southerly 6.8 miles including structures over the North and South Muskoka Rivers.

The extension of Highway 60 from Highway 11B to Highway 11 was completed for a length of 2.55 miles.

On Highway 65, grading, drainage, granular base and hot mix paving was completed from 0.9 miles west of Highway 11 at New Liskeard, westerly 13.2 miles.

Grading, drainage, granular base hot mix paving and structures were completed on Highway 69, Sudbury Southwest Diversion, for 8.08 miles.

On Highway 17, the new structure and approaches over the Wahnapiatae River Bridge was completed.

Northwestern Region — Cochrane, Sault Ste. Marie, Thunder Bay and Kenora Districts

On Highway 17, passing or truck climbing lanes were completed at nine locations, two east of Marathon Road, five between Highways 546 and 129, and two east of Highway 546.

On Highway 11, from Beardmore easterly, 14.6 miles of grading, drainage, granular base and hot mix paving was completed.

On the Hurkett-Armstrong Road, grading, drainage and granular base was completed by equipment rental from 8.0 miles north of Hurkett northerly 12.0 miles. Grading, drainage and granular base course was also completed by equipment rental on the Garden Lake Road from 18.0 miles west of Tertiary Road 800 westerly for 10.8 miles.

On Highway 71, grading, drainage and granular base was completed from 12 miles north of Sioux Narrows northerly 11 miles, and from south of Reed Narrows northerly,

1.72 miles as well as new structures over Reed Narrows and Berry Creek. Hot mix paving was completed from Highway 17 southerly 22 miles, and from south of Reed Narrows northerly 1.72 miles.

The Darlington Bay Bridge on Highway 596 was completed with 0.79 miles of grading, drainage and granular base work completed on the approaches.

Quality Control Office

On April 1, 1974, due to a reorganization within the Materials and Testing Office, the Quality Control Office was formed.

This office provides a specialist service in all aspects of quality control concerned with asphalt, concrete, soils and granular construction; provides a monitoring service of the daily quality control testing; evaluates new techniques, materials and equipment; and carries out investigational work to find answers to specific problems.

Highlights of work of non-routine nature undertaken during the year included:

- Evaluated pavement smoothness with the Mays Meter on several hundreds of miles of newly constructed pavement as well as many hundreds of miles of older pavements.
- Assisted in the design, construction, and inspection, of a test pavement on Highway 401, Toronto By-Pass, to evaluate the skid resistant properties of some 18 different asphalt mixes. Assisted in a similar test project near Guelph to evaluate various surfacing aggregates.
- Continued the evaluation of hot mix storage bins.
- Prepared specifications for the acceptance of drum-mix asphalt mixing.
- Assisted in the design, construction and inspection of three cathodically protected bridge decks.
- Evaluated a delamination detector for mapping deteriorated concrete in bridge decks.

- Assisted in the repair of delaminated bridge decks with epoxy injection techniques.
- Provided specialist assistance to districts on the use of Nuclear Density Equipment.
- Assisted the design, construction, and inspection of a chain link fence system for containing hazardous rock falls.
- Assisted in an evaluation of bridge deck waterproofing systems.
- Assisted various districts in concrete pavement stress relief techniques.
- Assisted in evaluation of slope stabilization.
- Initiated laboratory evaluation of lime stabilization of various clay soil problems.

MAINTENANCE BRANCH

This branch directs and controls all summer and winter maintenance carried out by the districts on all the King's and Secondary Highways throughout the province.

Roads snowplowed during the winter months totalled 14,887 miles, Salt used for de-icing roads totalled 428,591 tons and sand used for winter maintenance, 880,635 tons.

Seventeen districts reported 68,132 trees and shrubs were planted. Herbicide applications for weed and brush control covered 43,137 acres. Soil stabilization through grass seeding was carried out in all 18 districts covering some 3,660 acres. Tree removal operations accounted for a total of 8,251 trees. In landscape planning, some 217 projects were reviewed including 15 new route planning studies. Mulch pavement mixed and laid by Ministry forces totalled 35 miles in five districts.

Twenty-two zone stripers, 20 dual and two single machines zone striped 12,210 miles of King's and Secondary Highways and painted 6,085 miles of edge line.

A re-organization of the Structural

Maintenance Section was implemented to increase the scope of Head Office assistance to the districts in planning design scheduling and providing additional field assistance for structural repair and maintenance work.

This section inspected 908 bridges on King's and Secondary Highways and made recommendations for repairs and load restrictions where necessary. Reinforced concrete foundations and substructure were constructed by day labour to the south of Moosonee for a new bridge which will, when completed, form part of an access road to gravel deposits required for further major construction in the area.

The removal and replacement of the deck and superstructure of the CNR overhead on Highway 592, including intricate repairs to reinforce the high massive retaining walls were completed. Routine replacement and renovation to upgrade several Bailey bridges were done by district forces throughout the northern sections of the province. Deck replacement of the Oxtongue River Bridge, Highway 60, Huntsville District, was performed under a special maintenance contract.

Contracts for painting and metallizing of structural steel and handrails were carried out in seven districts. All steel bridges in the province with defective splices were repaired and girders with deepened webs over supports were rewelded in fatigue zones.

The Electrical Section, along with district electrical crews, was involved in the design and installation of, illumination at 180 locations, traffic signals at 107 locations, flashing beacons at 75 locations and signal lighting at 56 locations.

Ferry Services

The ferries, Wolfe Islander and Upper Canada operating between Kingston and Wolfe Island, compiled a total of 9,016 return trips and carried a total of 184,382 vehicles and 197,287 passengers.

The ferries, Quinte and Quinte Loyalist operating between Adolphustown and Glenora, made a total of 22,215 return trips and carried 237,475 vehicles. These ferries have no foot passenger accommodation.

Building Permits issued during the year by the Signs and Buildings Permits Section totalled 6,019, with a valuation of \$979,453,918; and permits for Field Advertising Signs totalled 6,203, with a valuation of \$72,299. Other permits issued included 2,717 Entrance Permits, 1,013 Encroachment Permits; and 2,441 Sign Permits and 5,492 renewals.

MUNICIPAL TRANSPORTATION BRANCH

During the year, 848 municipalities and 46 Indian Reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition 49 municipalities received subsidies under the Public Transportation Program and 37 municipalities received subsidies under the Traffic Signal Program.

Subsidies paid to municipalities, for roads and bridges, public transportation, rapid transit construction and traffic signal improvement programs were as listed below:

	ROAD MILEAGE	APPROVED EXPENDITURE	SUBSIDY PAID
Road and Bridge Section			
Metro Toronto	404.2	\$ 28,074,585.	\$ 14,037,293.
Regions	3,752.3	69,033,018.	39,078,947.
Counties	7,688.6	47,891,975.	30,090,811.
Townships	46,207.4	115,715,019.	63,897,027.
Urban Municipalities	20,054.2	176,668,421.	84,000,433.
	78,106.7	\$437,383,018.	\$231,104,511.
Public Transportation Section			
Rapid Transit	—	\$ 33,780,284.	\$ 24,625,034.
Capital Assistance	—	21,946,555.	16,455,417.
Operating Deficit	—	72,455,978.	36,227,989.
		\$128,182,817.	\$ 77,308,440.
Traffic Signal Section*	—	\$ 1,719,374.	\$ 841,435.

*This amount represents subsidies paid for traffic signal installations or modernization.

County and Regional Roads

Effective January 1, 1974, the Regional Municipalities of Durham, Hamilton-Wentworth, Halton and Peel were established. The Counties of Halton, Peel, Wentworth, Ontario and Northumberland and Durham were dissolved. The County of Northumberland separated from the United Counties of Northumberland — Durham and continued as a County Municipality. The 1974 expenditures on county, suburban and regional roads were as follows:

	Construction	Maintenance	Total
Metro Roads	\$17,274,585	\$10,800,000	\$ 28,074,585
Regions	46,222,620	22,328,677	68,551,297
Counties	28,271,617	19,620,358	47,891,975
Total	\$91,768,822	\$52,749,035	\$144,517,857

Municipal Transit Office

During the fiscal year 1974/75 the Municipal Transit Office was established to continue responsibility for administration of transit subsidy funds, and to provide technical expertise to municipalities on transit matters. As well, this office is responsible for administration of demonstration projects and the monitoring of the effectiveness of the municipal transit subsidy program. In 1974, \$36,866,710 subsidy was paid to municipalities to cover 50 per cent of the transit operating deficit incurred.

In the same year, \$16,370,504 subsidy was paid to municipalities to cover 75 per cent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, bus passenger shelters, transit terminals and repair facilities.

Subsidy for the rapid transit construction program in 1974 amounted to \$24,625,033.75. This covered 75 per cent of the cost of subway construction in Metropolitan Toronto and the major expenditures were for the Spadina Rapid Transit line, the purchase of 88 subway cars, and the purchase of property for the easterly and westerly extension of the Bloor-Danforth line.

Several transit demonstration projects were administered by this office, such as the Dial-A-Bus experiment in Toronto, the Sudbury Worker Bus Project and the Kingston Transit Marketing Program which are still in progress. The Trans-Cab experiment in Peterborough was successfully concluded in February with the City assuming the service with normal operating subsidies.

The Municipal Construction staff continued to provide guidance, advice and assistance to personnel of districts, municipalities and consultants in connection with the planning, design and supervision during construction of a substantial number of municipal projects of varying complexity.

In 1974 the Municipal Transportation Branch administered a Connecting Link Program involving 137 projects and an expenditure of \$9,309,000. This expenditure represents 75 per cent, 100 per cent or 90 per cent of the shareable cost depending on whether the project involved is a city, town or village.

The Development Roads program consisted of 79 projects and an expenditure of \$5,805,300. Usually this expenditure represents 100 per cent of the cost of reconstruction. The road remains under the jurisdiction of the municipality and the work is carried out either on a day labour basis or by means of contract.

During 1974 the Ministry expended \$1,911,740 in providing aid to 193 Local Roads Boards 32 Statute Labour Boards, 21 Indian Reserves and 79 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the province.

A further sum of \$1,095,767 was expended without local participation on the replacement of bridges and on grade improvements involving 110 projects on these roads.

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division comprises a range of capabilities which enable the Ministry to keep abreast of the wide fields of knowledge involved in transportation.

The research and development capability is contained within four units of the division: the Engineering Research and Development Branch; the Systems Research and Development Branch; the Transit Systems Research and Development Branch; and the Management and Testing Systems Unit.

ENGINEERING RESEARCH AND DEVELOPMENT BRANCH

This branch is responsible for physical research and development programs to improve pavements, structures and materials

used in transportation and to minimize environmental impacts. The branch is also responsible for co-ordination of the Ministry's impending conversion to the metric system. While many projects are undertaken directly by the staff of the branch, other call on the expertise and resources of Ontario universities and industry.

Notable projects undertaken during the year include the further development of a system of pavement management to select the most economical designs for new pavements and the evaluation of a number of new surfacings to find means of improving the surface characteristics of heavily travelled roads such as the Toronto By-pass on Highway 401. Load testing and evaluation of bridges to ensure their safe, load-carrying capacity and to develop new approaches to design has continued.

In addition, cathodic and waterproofing membrane protection systems for the reinforcing steel in older bridges were devised and are being evaluated in the field and laboratory. Studies were started on new applications of technology including tunnelling, segmental concrete bridge construction and remote sensing.

SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

The responsibility of the Systems Research and Development Branch is to identify, develop and implement research and development programs in areas of human vehicle safety interactions.

A major program underway is traffic management systems. This involves the evaluation and development of network simulation and traffic signal optimization computer programs for urban and freeway traffic; accident investigations and statistical analysis of articulated vehicle dynamics and performance; development of fuel conservation and oil recycling projects for this Ministry's participation in the Energy Management Program being administered by the Ministry of Energy.

The problem of sign truck hazard has been tackled by building a trailer barrier prototype now being tried in operation, and

by initiating the development of a crash attenuating attachment behind sign trucks.

The first computer program for road illumination has been developed which calculates illuminance, luminance and glare for given regular luminaire arrangements and straight road sections. The work is being continued to cover other conditions such as curves and intersections. Highway 401 lighting has been measured before and after resurfacing with black asphalt on test sections and results have been evaluated. The work will be continued with a pilot project of relamping and washing luminaires.

Evaluation of roadside accidents in view of rock cuts is well on the way and will be continued in terms of legal, statistical and technical aspects of the problem. Tests on a new design for the ends of our standard cable barriers were carried out successfully.

In the past year a substantial amount of research has been undertaken to improve the public acceptance of new transit modes. A household survey was conducted in the York Mills Dial-A-Bus service area during July, 1974 in order to provide a context for a variety of service improvements which were made in the fall. Since then, Dial-A-Bus ridership has increased substantially and additional survey work was done to further refine the concept.

A survey was also undertaken in the Peterborough Trans-Cab service area and some opportunities for increasing the role of the concept were identified and their feasibility is now being considered. Rider surveys have been undertaken in the Kingston area to assess the public acceptance of a Ministry marketing and advertising demonstration project.

A substantial amount of research has been done to improve citizen involvement in Ministry route planning processes with special emphasis placed upon improving ways of informing the public and the assessment of public opinion towards various route options in the study area.

The branch has also been active in the areas of seat belts, drinking and driving and speed and accidents. A major project underway is the development and

implementation of a seat belt education program. The purpose of the program is to provide information on how belts work and related information to improve knowledge about and attitudes toward seat belts with a view to increasing the rate of seat belt use in the province.

Through interministerial activities, this branch played a major role in the preparation of the report "Drinking-Driving in the Province of Ontario", submitted to the Provincial Secretary for Justice by the Interministerial Committee on Drinking and Driving.

A preliminary report on speed and accidents prepared by the branch presents the most recent information available concerning the effects of the U.S. speed limit reduction on highway safety and its implications for Ontario.

TRANSIT SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

This branch is responsible for conducting research and development programs on transit systems and subsystems and in so doing identifies needed improvements and developments in current transit technology through state of the art studies.

Light rail transit systems became a main area of concentration for this branch and two major LRT programs are continuing to flourish.

The first is the Near-Term Light Rail Transit Program to develop a conceptual design for an LRT system which meets the ICTS system requirements in general and the specific application requirements in the cities of Ontario. As a result of this program a draft functional specification for an LRT vehicle was prepared which can be used as an input to detailed design specification. Phase 1 of a three-phase study was begun to attenuate noise from railed vehicles.

An urban rapid transit system safety study was also performed to determine and document MTC participation in this area with regards to user and non-user, operator and maintenance personnel, jurisdiction, legalities and possible alternatives for Ministry

involvement. A study to develop a method of designing magnets with a high lift to weight ratio for magnetic levitation was also under taken.

The second major program in light rail transit is the Advanced Rail Transit Program to advance the state of the art in selected areas of system technology, operation and application and to promote such advancement by all interested Ontario concerns. It is hoped that improvements will be made with regard to research and development in rail transit technology and operation regarding existing systems and in advanced systems design and application.

The first main project to emerge from this program was one of energy management co-ordination. The purpose is to initiate and co-ordinate investigations aimed at improving and optimizing energy subsystems in rail transit.

Two offshoots of this project are a study on flywheel energy storage (where the factors of interest are cost, energy storage properties and efficiencies, size and weight, reliability and safety) and a Phase I study reviewing the aerodynamics of rail transit vehicles. the purpose of the latter is to establish the background in rail transit aerodynamics and to define aerodynamic research projects to be undertaken by the Ministry.

A program on transit infrastructure was launched to ensure that the most effective infrastructure can be produced for new transit facilities in Ontario. The branch is defining infrastructure as consisting of the fixed facilities supporting the vehicles, such as guideway structures, track, stations and associated power distribution systems.

Systems applications programs have continued from last year, namely network simulation for evaluating different operating strategies for fixed guideway transit systems and station simulation for continued planning and design of stations and operating characteristics for revenue service.

A model split study to determine the effects of level of service provided by transit, auto, demographic data and land use on the division of trips between public and private transit was begun and work continued on

studies to determine the effectiveness of various types of highway noise barriers and noise reducing surface treatments of roads.

A number of state of the art status reports in transit technology were begun for the awareness of all parties involved in the process of planning and selecting transportation systems.

Management and Testing Systems Unit

This unit was formed in February 1975 and its purpose is to provide management and testing systems capability within the Research and Development Division and for the Ministry as a whole where research and development work is requested in these areas.

The unit's activities extend into the following areas: knowledge acquisition systems; project management systems (including implementation); computer management systems; equipment management systems; testing systems; instrumentation systems; testing facilities management and technical information.

Within this unit the Testing and Instrumentation Systems Section have been very active in respect to projects within the division requiring laboratory facilities and testing equipment design capability.

The extensive and complex evaluation of the Conestoga Bridge is the single largest project currently underway and this has utilized a large part of the staff on instrumentation. However, the total bridge testing program planned for the summer involves a number of other bridges and, consequently will provide much of the field staff associated with the Testing and Instrumentation Sections with their major work load during this period.

A study of available testing sites is underway so that no program will suffer through lack of proper means. These full scale testing needs include the articulated vehicle study.

A strong effort has been applied to the problem of project management and budget control by means of systems developed within

the unit and implemented throughout the division. These systems provide a means for estimating project costs prior to approval and for monitoring the achievement and progress level for projects which are approved for actual work.

All divisional projects are controlled in this manner and there is a direct link between the planned project costs and budget needs for the division. This close affinity has led to an integrated systems approach with low cost data input methods. By utilizing as much as possible the existing manual approaches, the introduction of these systems has been effected with little or no reaction from the staff except one of ready acceptance.

Progress on projects is reported on a quarterly basis while budgetary data including commitments and unrecorded expenses is provided on a monthly basis.

The Technical Information Group is active in establishing and implementing an information design and management program

for publications and audio/visual presentations emanating from research and development activities. This involves the identification of information resource requirements for the division's programs, responding to those requirements within house capability in technical editing, writing and graphic design services, and a monitoring of publishing, editing and graphic design capabilities in industry and education.

Training for divisional staff on necessary computer courses is arranged for by this unit and activity is at an acceleration level.

A method of data acquisition by means of externally directed computer searching was introduced recently and is in the evaluation stage. Results look promising and use has been made of the system ministry-wide.

Control of all equipment including vehicles for special testing and the arrangement for the acquisition and scheduling of all such needs is also actively done by this unit.

ADMINISTRATION

FINANCE AND DATA PROCESSING DIVISION

The Finance and Data Processing Division is responsible for providing the following categories of services: accounting and financial planning services mechanized and non-mechanized system services; internal management consulting services; and the acquisition of automatic data processing production services. The division is also responsible for preparing the Ministry's annual estimates and five-year financial plan.

FINANCIAL BRANCH

The Financial Branch fulfills the normal functions of recording, monitoring and controlling both expenditures and revenues of the Ministry. It provides advisory assistance to management on financial matters and acts as the liaison between the Ministry and the Central Agencies, other arms of government, and the public in the area of finance and accounting.

The branch is also responsible for the prequalification of contractors who wish to bid on Ministry contracts. It maintains a substantial statistical recording unit for the provision of statistical information concerning most subjects affecting the Ministry in quantities, dollar volume, units and prices, indices, and geographic locations and it provides the Head Office accounting for all the branches of the Ministry which are located at Downsview.

Program Analysis Office

The functions of the Program Analysis Office started in 1969 and have been expanded to embrace the recommendations

of the Committee on Government Productivity Reports.

This office is responsible for determining the Ministry's financial profile over the short (annual) and medium (three year) terms. It also examines ten to twenty year-forecasts of cash flows and various methods of funding and revenue generation.

The Ministry's output from its current programs, in terms of goods and services, are measured with respect to the effectiveness of resource allocation. In addition, policy analysis and review are carried out on new program areas to support the decision-making processes.

With the advent of the "Management by Results" Program, initiated by Management Board in 1974, the Program Analysis Office is required to prepare agreements for performance review. These agreements concern themselves with the objectives, costs and time schedules of projects undertaken by the Ministry. The major part of this office's activities involves close liaison with Management Board of Cabinet, the Cabinet Committee of Resources Development and other Ministries in the Resources Policy field.

ENGINEERING AND MANAGEMENT SYSTEMS BRANCH

The Engineering and Management Systems Branch was formed on September 1, 1974 as a result of the Committee on Government Productivity Interim Reports No. 5 and No. 9 in which it was

recommended that computing hardware and associated production personnel along with some application programmers and systems analysts report to, and be the responsibility of, the Ministry of Government Services. In keeping with this recommendation, the Ministry on April 1, 1974 transferred the computer operations, along with 44 personnel, to the Ministry of Government Services. On September 1, 1974, 20 application programmers and systems analysts were also transferred.

The main responsibility of the branch is to provide the Ministry program managers with expertise in non-mechanized and mechanized systems, management science and the acquisition, development and maintenance of automatic data processing services.

There are currently 148 computerized systems requiring continuous innovation and improvement. All of these are developed and maintained by the Co-ordinators' Offices of the branch. The activities of the branch are organized into the following offices:

System Co-ordinator's Offices, Engineering and Research and Planning and Design

These offices are responsible for the design, development and maintenance of systems for various applications including the spectrum of engineering and scientific activities.

System Co-ordinator's Office, Drivers and Vehicles

During the past year, this office designed and developed a remote on-line driver enquiry system. An automated vehicle system is currently under development which will provide on-line enquiry capabilities regarding vehicle ownership, transfer, for police and other applicable jurisdictions.

System Co-ordinator's Office, Finance and Administrative

During the past year, this group was responsible for the development of a new financial system as well as maintaining the current budget and summary statements for all levels of management of the Ministry.

Management Science Office

This office's major responsibility is to assist Ministry senior management to carry out new ideas and improvements with respect to organizational review, operations review and systems critique. Some projects this office actively participated in during the past year are: a Ministry-wide decentralization study, a major reorganization study of the systems function of the Ministry, a training program for all Ministry personnel and a performance budgeting study.

Production Services Office

This office is responsible for the provision of comprehensive support to all users of the Ministry with respect to, data conversion, technical control, documentation and administrative support, computer services monitoring and graph plotting services for engineering applications.

RIGHT-OF-WAY AND SERVICES DIVISION

RIGHT-OF-WAY BRANCH

This branch comprises the Land Surveys and Property Offices which are responsible for the legal land surveys and the property acquired by the Ministry.

Land Surveys Office

This office develops policies and procedures for legal land surveys, plan preparation and registration. The five regional offices prepared and registered 1,684 plans which were registered in the appropriate registry and land titles office during the year. In addition 202.34 miles of highway were designated as controlled-access highways, bringing the total mileage of such highways to 3,233.25 miles.

Continuing its program of co-ordinate control surveys on highways throughout the province, Land Surveys established an additional 1,000 control survey monuments for a total of 10,400 now evaluated on the Ontario Co-Ordinate System.

The extensive training program was

continued. In surveying and drafting, 105 candidates tried qualifying examinations and 64 passed. In the apprentice program for Ontario Land Surveyors, three employees successfully wrote various examinations.

Property Office

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions, are developed by this office.

Using these policies and procedures, staff in five regional offices negotiated 1857 amicable property settlements. The Ministry expropriated 466 properties to obtain title for land required to permit contracts to proceed.

The Ministry expended \$39,548,098 in payment of compensation in acquiring title to lands required for highway projects. An additional \$2,254,694 was paid to owners affected by expressways, subject to cost sharing agreements between the Ministry and municipalities involved.

Revenue of \$2,208,995 from the sale of surplus lands and \$593,546 from leasing properties was received by the Ministry. The extensive training program was continued and affected 46 staff who attended courses and examinations in real estate matters and 45 were successful.

SERVICES BRANCH

Special Services Office

The Special Services Office administers two main programs involving the Ministry's total building and space requirements including office furnishings and equipment.

- liaises with the Ministry of Government Services on all matters relative to buildings, building site and office and shop facility accommodations with regard to the Ministry's regional and district head quarter complexes.
- designs and prepares architectural drawings and tender documents for

construction of the Ministry's patrol garage, storage dome, and vehicle inspection station requirements.

This office is also responsible for all communication facilities within the Ministry (radio, teletype, intercom, telephone and postal services) and for the administration of service centres on controlled-access highways.

Two major communication problems undertaken in the past year were the design of multi-channel VHF/UHF radio systems for Toronto and Stratford Districts as part of the radio system replacement program. These systems will incorporate the most up-to-date radio equipment available and a number of advanced features will be combined in this unique systems concept.

Twenty-three service centres were in operation at the end of the past year, 19 on Highway 401 and four on Highway 400. Twenty-one picnic area sites located adjacent to service centres were available for the use of the motoring public.

In the past year the formation of a Program Management Group within Special Services Office has accelerated the major capital construction program to the extent that eight major buildings are now under construction.

Graphic Services Office

The principal functions of the Graphic Services Office are to provide printing and duplicating services; a wide variety of high quality black and white and color reproduction services using photographic, Diazo, screen processing and Xerox methods; and a commercial art and display service for the various Ministry programs.

The office dealt with approximately 42,000 requests for various services during the year.

Record Services Office

The Record Services Office administers a program of records management providing assistance to all Ministry organizations in the efficient handling of records and information. Under this program, Forms Management and Microfilm Services are centralized services

used to improve the Ministry's records keeping practices. Accumulated benefits under this program are in excess of \$500,000.

The office also provides library service which is recognized as an authoritative source of information in the Ministry's fields of interest and responsibility. Publication services, including the printing, distribution and sale of Ministry maps and publications is a further responsibility of this office. Revenue from the sale of county maps is in excess of \$29,000 annually.

THE PUBLIC AND SAFETY INFORMATION BRANCH

The Public and Safety Information Branch is comprised of the former Information Services Office and the Safety Office.

The major functions of this branch are to disseminate all aspects of information related to Ministry operations through the use of press releases, speeches, statements, Media conferences, displays and films.

This branch creates, promotes and organizes transportation safety education and information programs for all age groups. They range from the Nursery School and Kindergarten Program to the Seat Belt Program and are aimed at promoting public safety awareness. The necessary expertise required for layout, marketing and advertising is also provided to produce brochures, pamphlets and booklets.

In addition this branch is responsible for producing television and radio spots, slide shows and news photos; planning and co-ordinating exhibits and displays; planning and operating the "Safety Caravan" at Fall Fairs, Winter Carnivals and other public gatherings; arranging and organizing official functions and opening ceremonies; producing several periodical publications, including the MTC News, The Ontario Traffic Safety Bulletin and the Annual Report; and providing the Ministry's road reporting service to the motoring public.

SUPPLY BRANCH

This branch is responsible for

purchasing, disposal, stores, tendering and fleet management through the following offices and sections:

Purchasing and Supply Office

The Purchasing Section is responsible for the purchase of all motor vehicles for the Ontario Government, as well as construction and maintenance materials and general supplies, for the Ministry. Annual purchases total about \$67 million.

The disposal of all used equipment and surplus material for the Ministry as well as all motor vehicles for the Ontario Government is done through the Material Control Section. Disposal is by means of public auction or tender and sales total about \$2,800,000 a year.

Through the Stores Section the Ministry takes advantage of savings by bulk purchasing and facilitates the operational part of the Ministry by having materials available when required. They also recondition and store Bailey bridge components for emergency use throughout the province. There are currently 220 such installations in the province for the Ministry, municipalities or other agencies.

Equipment Office

The Equipment Office is responsible for the management of the Ministry's equipment fleet. This includes control of the procedures in eighteen district garages, and control of equipment maintenance. The acquisition of new equipment, both for replacement and additions to the fleet is controlled, specified and financed by this office.

In the last fiscal year, the Equipment Office organized training for the first line of supervision of the garage staff, and courses for district equipment instructors.

A new pavement marking machine was designed and built. This machine uses hot, instant-drying paint, thus eliminating the need for traffic-obstructing cones.

Tenders Office

This office promotes and maintains strict security over all tendering procedures, tenders in custody and all highly confidential matters

related to engineering and supply contracts.

Approximately 14,000 tenders were received and processed for 2,800 various contracts. Public attendance by contractors and suppliers numbered 2,400 at the tender openings.

In the advertising function, this office placed approximately 4,400 insertions on behalf of the Ministry on a province-wide basis. These advertisements were to call tenders on engineering and supply contracts, property sales, equipment sales and a variety of other notices. The direct cash sales of Contract Documents, the Standard Specification Manual and the Ministry's "Contract Bulletin" to the contracting industry has produced an annual revenue of approximately \$30,000.

AUDIT BRANCH

This branch is responsible for the audit activities of the Ministry. To accommodate this function, the branch is segregated into two areas of responsibility.

Financial Audit Office

This group is engaged in the expenditure,

revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units.

The staff also perform audits in municipalities dealing with Ministry subsidized road and transit expenditures.

This function also extends to such agencies as the Ontario Northland Transportation Commission, as well as specific programs concerning expressways and connecting links.

Engineering Audit Office

The Engineering Audit Office, with complement in five regional offices and head office, audit all phases of the Ministry's capital construction program. Audits are also completed on Ministry subsidized contracts. In 1974-75 some 700 interim audits were performed to ensure progress payments on capital and subsidized contracts were up-to-date.

Claims investigations, over 2,500 weigh audits, confirmation of final contract pay quantities on all contracts and force accounts rounded out this office's activities.

DRIVERS AND VEHICLES

LICENSING AND CONTROL DIVISION

This division deals with all aspects of the regulation, control and safety of drivers and vehicles in the province.

Between 1963 and the end of 1974, Ontario's population grew from 6.48 million to 8.14 million and traffic deaths increased from 1,421 to a high of 1,959 during the year 1973, with a decrease in 1974 to 1,748.

This year, the number of motor vehicle traffic collisions reported totalled 204,271, an increase of 5.8 per cent over 1973. However, there were decreases of 9.5 per cent in fatal collisions and 10.8 per cent in persons killed while the personal injury collisions and number of persons injured increased 1.6 per cent and 0.9 per cent respectively.

The motor vehicle collision rate per one million miles travelled increased this year to 5.2 per cent; the death rate and fatal collision rate per 100 million miles travelled continued their downward trend to 4.4 per cent and 3.7 per cent which are the lowest rates during the past 20 years. The number of miles driven in 1974 was estimated at 39,400,038,000 an increase of 4.3 per cent over the 1973 figure.

DRIVER BRANCH

The Driver Branch is responsible for the licensing and post-licensing control of drivers, which includes identification of areas of concern in matters of safety and the development of programs to counter these concerns. The chief functions of the branch encompass the licensing of drivers, maintenance of all driver records, administration of the Demerit Point System,

administration of license suspension and reinstatement of the driving privileges and review of the competence of all drivers known to have medical or physical conditions.

In 1974, Ontario's driver population increased by 131,352 or 3.3 per cent over 1973 for a total of 3,972,980 licensed drivers. More than 1.25 million certificates of conviction for traffic violations were recorded. On the basis of these records, 110,374 suspensions of driver licenses were applied compared to 69,448 the previous year. This disproportionate increase in suspensions resulted from legislation requiring suspension for default in payment of a traffic fine.

Under the discretionary authority of Section 27 of The Highway Traffic Act, 2,506 were suspended after the individual in each case was afforded the opportunity of a hearing. This category includes suspension for medical reasons as well as those with a history of repeated drinking and driving offences.

Under the Demerit Point System, 104,903 warning letters were issued to drivers at six to eight points; 28,075 drivers were interviewed or were subject to other driver improvement actions at the nine to 14 point level.

VEHICLE BRANCH

The Vehicle Branch administers The Public Commercial Vehicles Act, The Public Vehicles Act, The Motor Vehicle Transport Act (Canada), The Motorized Snow Vehicles Act and those sections of The Highway

Traffic Act which relate to licensing, inspection and regulation of vehicles.

The Vehicle Licence Section is responsible for the registration of all motor vehicles, trailers and motorized snow vehicles required to be registered. Service is provided by 291 appointed licence issuing agents across the province.

Highway Carrier Licensing Office

This office has the responsibility of the issue of operating licences under The Public Vehicles Act, The Public Commercial Vehicles Act and The Motor Vehicle Transport Act (Canada), in addition to vehicle licences that are displayed on those vehicles that operate under the authority of these statutes.

The number of operating licences in effect under the aforementioned statutes totalled 12,425 and the number of vehicle licences issued during the licence year ending March 31, 1975, amounted to 58,118. The revenue derived from the issue of public commercial vehicle licences in the various classifications for the fiscal year 1974/1975 totalled \$7,993,936.00.

REGIONAL OPERATIONS DIVISION

During 1974/75 the Regional Operations Division completed the regionalization of Drivers and Vehicles field operations. The division headed by an Executive Director at Queen's Park is divided into 13 districts contained within five regions. The first of these five regions was established in September, 1973 with the implementation of Eastern Region, headquartered at Kingston. This was followed by implementation of the other regions during 1974/75 as follows:

April 1, 1974 — Northwestern Region with headquarters at Thunder Bay,

June 17, 1974 — Northern Region with headquarters at North Bay,

July 1, 1974 — Southwestern Region with headquarters at London,

September 1, 1974 — Central Region with headquarters at Queen's Park, Toronto.

The field operations carried out in this

division encompass the following activities:

Driver Examination — A total of 612,005 inside pre-examinations were conducted at 165 driver testing facilities throughout the province, and 400,926 road tests were conducted by a staff of 240 driver examiners. The failure rate on the first attempt was 30.1 per cent.

Thirty high school driver instruction teachers were employed as driver examiners during the summer of 1974 to handle the high volume of summer tests. Also during this year, Ontario recruited the first female examiners with a total of five on staff by the end of 1974 located at various centres throughout the province.

Driver Improvement Counselling — A staff of 17 counsellors conducted 28,000 interviews with Ontario drivers reaching the nine-point level under the Demerit Point System.

Vehicle Registration — Ministry licence issuing offices provided registration service for motor vehicles, trailers and motorized snow vehicles at seven locations, namely Ottawa, Hamilton, Mississauga, Stratford, Oshawa, Chatham and Queen's Park, Toronto.

Vehicle Inspection — Thirty new vehicle inspectors were added to the staff of 45 to carry out new programs. On September 1, 1974 new regulations regarding a method of certifying the fitness of used motor vehicles at the time of sale or transfer came into effect. Only appointed inspection stations and motor vehicle inspection mechanics, registered under the program and in the employ of a station, are permitted to complete safety standards certificates.

Private sellers of used motor vehicles, as well as dealers in used motor vehicles, are required to produce to the purchaser at the time of delivery of the vehicle, a safety standards certificate.

From the date of implementation up to April 1, 1975 a total of 7,800 stations and 14,800 mechanics have been licensed under this program. A total of 962,220 safety standards certificates were filed in 1974.

The inspection of safety related vehicle

components or systems is carried out at roadside inspection sites all across Ontario. MTC truck inspection stations are most frequently used. A program involving the inspection of commercial motor vehicles was introduced and 53,676 inspections were carried out during the first year. Preliminary assessment of the data gathered indicates that there has been improvement in the condition of safety critical vehicle components and systems.

During the year, 35,000 vehicles were inspected at the vehicle inspection lanes at Downsview and 29,000 vehicles were inspected by portable safety lanes travelling throughout the province during the summer months.

In the semi-annual inspection of school buses some 20,000 inspections were made across the province.

Highway Carrier — In order to provide protection for highway users and for the highway system itself 245 Highway Carrier Officers are responsible for the regulation of for-hire trucks and buses and the enforcement of the provincial weight laws. A total of 50 truck inspection stations are operated throughout the province, additional stations being opened during this year at King, Woodbridge, Lancaster and Bismarck.

Highway Safety — A public safety consultant is located in each region to carry out a variety of activities related to the promotion of highway safety.

This program covers a number of safety-related activities, including involvement in high school driver education, school bus seminars, local Safety Council programs and enforcement agency traffic safety activities.

SPECIAL REPORTS

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

The financial statement of the Commission for the year 1974 reflects the costs of providing transportation and communication services to the people and the industry of northern Ontario. Inflation, coupled with the freeze on freight rates and the extension of services, have conspired to paint a disappointing financial picture.

But Ontario Northland has other goals and objectives beyond those illustrated on the balance sheet and the income statement. Nineteen seventy-four saw the Commission achieve some noteworthy objectives.

Planning and Development

The Planning and Development Department provides both short and long term data to assist in managerial decisions, and maintains liaison with the Ministry regarding matters of concern to the Commission.

Major Projects in 1974 included:

- Completion of the M.S. Chi-Cheemaun which entered service in September;
- Start of construction of the new Chief Commanda II at Callander;
- Pre-design and property search for the new Toronto terminal for Ontario Northland Transport Services;
- Preliminary implementation of north-western expansion of norOntair;
- Completion of preliminary study of rail passenger services to northeastern Ontario.

the department began operation with the appointment of the Ontario Northland's first systems development engineer in July.

Air Services

1974 was a successful year of growth for Ontario Northland's local and feeder air service, norOntair. During the year, 27,393 persons were carried by norOntair, which constitutes an 86 per cent growth rate over 1973.

A new format was implemented wherein Bradley Air Service took over flying operations on the original Timmins — Sault Ste. Marie — Sudbury — North Bay — Earlton — Kirkland Lake network. At the same time White River Air Service introduced norOntair over a new Kapuskasing — Timmins — Sudbury route.

Marine Services

The outstanding event of the year was the introduction of the 3600-ton vessel, M.S. "Chi-Cheemaun" on the Tobermory — South Baymouth ferry service. Despite difficulties, nearly 120,000 persons were carried during the season.

Lake Nipissing marine operations saw the retirement of the "Chief Commanda" at the close of the season.

Telecommunications

Long distance calling continued to rise with a 28 per cent increase in completed calls over the previous year's six million. This figure however, is somewhat misleading as about one-third of the increase resulted from taking over a local long distance operation consisting of short-haul, low revenue traffic from the major local telephone company in the area, Northern

Telephone. Gross revenue rose 14 per cent over 1973. A significant increase in the share of long distance revenue was afforded to Northern Telephone and affected 1974 expenses, but, a net revenue increase of 11 per cent over 1973 was realized.

The community of Winisk on the shore of Hudson Bay, was provided with modern long distance telecommunications through radio and power installations coupled with a lease of satellite services. Modern long distance facilities were provided to the communities of Matachewan, Virginiatown and Larder Lake, permitting conversions in those places to dial telephone service. A second television network was extended from a Timmins outlet to Kapuskasing on Ontario Northland microwave, and microwave facilities were put into service to Hearst and 90 miles beyond to upgrade telecommunications to that area.

Bus Services

Gross revenue increased in excess of 17 per cent. Tour revenue more than doubled from the previous year with tours originating to the Maritimes, and greater response to our Florida and South Carolina tours.

Bus Parcel Express indicates a steady increase in popularity enjoying a 25 per cent increase in revenues.

The fleet was increased by one bus to 19 with the purchase of two 47-passenger buses and the sale of one 39-passenger bus.

Express Services

Revenue increased \$97,890 (7.5 per cent) for the year 1974 over 1973.

Local express rates were not increased in 1974 and remain at least 20 per cent below the national level. Package express rates were introduced on an interline basis in conjunction with CN and CP.

Transport Services

Transport services continued to grow at a steady pace in 1974. Freight handled was

150,222 tons representing an increase of 6.3 per cent over 1973.

**ONTARIO TELEPHONE
SERVICE COMMISSION**

The Ontario Telephone Service Commission is responsible for regulating the providers of telephone services under provincial jurisdiction pursuant to The Telephone Act, R.S.O. 1970, Chapter 457.

As of January 1, 1975, there were 40 Independent Telephone Systems in Ontario with approximately 230,000 phones and an estimated total capital expenditure for plant and equipment, of \$107 million.

During 1974, the Commission dealt with 130 applications under the provisions of The Telephone Act, requiring approval for revision in the rate structure; the borrowing or the issuing of capital; or when making agreements for interchange of service.

**ONTARIO HIGHWAY
TRANSPORT BOARD**

The Board continued to hold meetings in various parts of the province where it is most convenient and economical for parties involved. Applications received by the Board totalled 3,106, of which 1,829 were related to The Public Commercial Vehicles Act; 518 to The Public Vehicles Act; and 759 to The Motor Vehicle Transport Act (Canada).

Following is the statement of revenue of the Ontario Highway Transport Board:

REVENUE 1974	
Application fees	— \$108,660.00
Hearing Cost	— 37,679.24
Tariff of Tolls	— 72,140.25
Fees for certificates, etc.	— 2,554.18
Gross Revenue	\$221,033.67
Less refunds on applications and tariff of tolls	1,854.48
Net Revenue	\$219,179.19

TORONTO AREA TRANSIT OPERATING AUTHORITY

The year was one of change and expansion for GO Transit.

The greatest part of the change involved the administration of GO Transit which became the responsibility of the newly-created provincial crown agency, the Toronto Area Transit Operating Authority on September 1, 1974.

TATOA is provincially-funded but is administered by a board of directors consisting of a chairman appointed by the Province, the chairman of Metropolitan Toronto and the regional chairmen of the regions of Peel and York. The chairmen of the regional municipalities of Halton and Hamilton-Wentworth sit as associate members.

TATOA provides inter-regional transit services throughout its area through GO Transit. It also acts as a co-ordinator of local transit services both with each other and with the GO services. TATOA promotes co-operation among transit operators in the fields of joint marketing, consolidated information services and uniformity of equipment to allow for joint purchasing and the resulting economies of scale.

GO Transit underwent its first rail route expansion in 1974 with the May opening of the Georgetown GO Train service. Consisting of three trains each way a day, five days a week, the Georgetown route proved an

instant success, growing from an average of 1,500 riders per day in the first month of operation to more than double that by year's end.

The year produced record carryings for the GO system with 7.3 million rail passengers and 3.4 million bus riders being recorded. August brought extreme pressure on the GO system when the Toronto Transit Commission and Gray Coach Lines were shut down for three weeks in a labour dispute. The shutdown occurred during the busy CNE period bringing even more intense pressure on the GO rail system. As most GO Buses are operated by Gray Coach Lines, few GO Buses operated during the strike yet GO carried almost a million extra passengers in that period and the media gave credit to GO for keeping local commerce from coming to a complete halt.

The GO equipment fleet also grew in 1974 with the addition of three new 3,000 hp diesel electric locomotives, five Auxiliary Power Control Units designed to supply electrical power to GO coaches, and 14 new transit buses.

Near the end of the year, plans were announced to order 80 Canadian-designed and built bi-level rail coaches for use on the Lakeshore line which was running at capacity during rush hours with conventional uni-level equipment. The bi-levels would allow a 75 per cent increase in capacity in the same length train.

MINISTRY EXPENDITURE BY HIGHWAY

April 1, 1974 to March 31, 1975

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster — Windsor	\$ 4,648,307	\$2,120,224
2A	Hwy. 401 (MCF) — Hwy. 2 (Toronto)	2,450	—
3	Fort Erie — Windsor	1,428,498	1,464,721
4	Port Stanley — Flesherton	549,669	778,723
5	Toronto — Paris	176,798	426,655
6	Hwy. 24 — Tobermory	2,253,591	1,336,064
7	Ottawa — Sarnia	9,733,377	3,053,693
7A	Hwy. 115 — Hwy. 12 (Manchester)	16,565	148,750
7B	Peterborough — Chemong Corners	15,111	5,187
8	Winona — Goderich	705,782	495,939
9	Hwy. 11 — Kincardine	36,748	678,301
10	Port Credit — Owen Sound	1,111,186	678,669
11	Toronto — Rainy River	11,754,405	4,714,301
11B	At New Liskeard	—	40,647
12	Whitby — Midland (7)	1,004,803	571,460
14	Bloomfield — Marmora	477,243	173,525
15	Kingston — Ottawa	1,551,629	302,954
16	Johnstown — Ottawa	261,360	250,659
17	Quebec Boundary — Manitoba Boundary	10,711,455	5,448,965
17B	At North Bay	6,525	3,335
18	Leamington — Windsor	245,985	172,240
18A	Kingsville — Hwy. 18	3,111	66,082
19	Port Burwell — Tralee	14,263	379,520
20	Niagara Falls — Hamilton	1,247,255	333,749
21	Hwy. 3 (Morpeth) — Owen Sound	1,228,779	963,230
22	London — Hwy. 7	25,418	133,593
23	Hwy. 7 — Hwy. 9 (Teviotdale)	574,642	305,742
24	Hwy. 59 — Collingwood	1,374,647	2,225,258
24A	Paris — Galt	—	53,751
25	Oakville — Hwy. 89	538,541	307,987
26	Barrie — Owen Sound	246,235	355,360
27	Toronto — Penetanguishene	1,906,151	551,887
28	Port Hope — Bancroft	1,119,517	492,162
29	Brockville — Arnprior (15)	521,708	246,979
30	Brighton — Havelock	19,695	118,443
31	Morrisburg — Ottawa	985,325	231,966
32	Gananoque — Hwy. 15	—	46,015
33	Kingston — Stirling	186,592	323,543
34	Hwy. 2 (Lancaster) — Hawkesbury	2,138,649	167,064
35	Hwy. 401 — (Newcastle) — Dwight	373,804	501,806
36	Burleigh Falls — Lindsay	1,049,791	156,840
37	Belleville — Hwy. 7 (Actinolite)	322,708	260,793
38	Kingston — Hwy. 7 (N. of Sharbot Lake)	519,124	748,251
40	Blenheim — Sarnia	3,220,015	267,843

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
41	Napanee — Pembroke	\$ 811,847	\$ 688,619
42	Brockville — Westport (29)	1,552,415	129,004
43	Alexandria — Perth	352,291	425,208
44	Hwy. 17 — Hwy. 29 (Almonte)	—	40,549
45	Cobourg — Norwood	31,081	127,236
46	Hwy. 7 (E. of Manilla) — Cobocok	397,032	126,899
47	Hwy. 48 (N. of Hwy. 7) — East of Hwys. 7 & 12	24,838	175,349
48	Toronto — Hwy. 46 (Bolsover)	4,205,816	351,100
48B	Jct. 12 & 48 to Jct. 48	—	38,482
49	Picton — Hwy. 2 (W. of Deseronto)	1,732	58,645
50	Toronto — Hwy. 9 (N. of Palgrave)	421,974	157,179
51	Rondeau Provincial Park — Jct. Hwy. 3	12,942	16,172
52	N. of Hwy. 97 S — Hwy. 2	544,145	105,968
53	Hamilton — Hwy. 2 (Eastwood)	682,349	199,280
54	Cayuga — Cainsville	917,492	176,072
55	Jct. Hwy. 8 — Niagara	155,961	55,025
56	Jct. Hwy. 3 — Jct. Hwys. 53 & 20	50,250	101,279
58	Port Colborne — St. Catharines	324,429	188,183
59	Long Point — Hwy. 3 (E. of Tillsonburg)	845,487	392,962
60	Hwy. 17 (W. of Renfrew) — Huntsville	742,951	601,155
61	International Border — Thunder Bay	356,408	97,682
62	Hwy. 14 (N. of Belleville) — Pembroke	814,030	596,543
63	North Bay — Quebec Boundary	19,439	154,703
64	Sturgeon Falls — Hwy. 11	872,364	364,990
65	Quebec Boundary — Matachewan	708,957	238,395
66	Quebec Boundary — Hwy. 65	26,809	205,145
67	Iroquois Falls — Hwy. 101	506	58,413
68	Hwy. 17 (Espanola) — South Baymouth	80,357	317,320
69	Hwy. 12 (N. of Brechin) — Capreol	3,040,023	1,865,664
70	Springmount — Hepworth	1,893	43,076
71	Fort Frances — Hwy. 17 (E. of Kenora)	1,978,593	250,764
72	Hwy. 17 (Dinorwic) — Sioux Lookout	118	108,249
73	Port Bruce — Dorchester	67,569	127,650
74	Hwy. 3 (New Sarum) — Nilestown	401	352,386
75	Prop. Hwy. — Canboro — Bismark	30,335	—
76	Hwy. 3 (Eagle) — Hwy. 2	8,831	61,773
77	Leamington — Hwy. 401 (North of Comber)	834	56,905
78	Hwy. 21 (Dresden) — Wallaceburg	830	49,380
79	Hwy. 2 (Bothwell) — Hwy. 7	23,677	127,719
80	Hwy. 2 (S. of Glencoe) — Courtright	55,028	518,424
81	Delaware — Grand Bend	40,193	205,162
82	Hwy. 7 (Thedford) — Hwy. 21	14,614cr.	50,567
83	Hwy. 23 (Russeldale) — Hwy. 21	—	122,689
84	Hensall — St. Joseph	131	51,270

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
85	Kitchener — Elmira	\$ 33,253	\$ 59,532
86	Guelph — Amberley	38,132	825,599
87	Harriston — Hwy. 86 (Bluevale)	739	101,779
88	Bradford — Hwy. 27 (Bond Head)	—	72,321
89	Hwy. 400 — Hwy. 23 (E. of Palmerston)	51,753	429,048
90	Barrie — Angus	6,284	70,143
91	Stayner — Duntroon	—	24,776
92	Elmvale — Wasaga Beach	819	54,938
93	Hwy. 11 (E. of Barrie) — Waverley	154,292	106,907
94	Callander — Hwy. 17 (S. of North Bay)	—	19,396
95	Hornes Point — Wolfe Island	14,185	32,597
96	Quebec Head — W. End of Wolfe Island	77,986	100,087
97	Hwy. 6 (Freelton) — Hickson	10,252	239,947
99	Dundas — Hwy. 24 (North of Brantford)	763,981	109,410
101	Quebec Boundary — Hwy. 17 (Wawa)	2,950,039	946,705
102	Thunder Bay — Sistonens Corners	1,553,462	94,754
103	Port Severn — Hwy. 69	17,768	134,558
104	Hwy. 9 — Grand Valley	350	—
105	Hwy. 17 — Red Lake	13,272	289,224
106	Hwy. 28 (Dale) — Hwy. 2 (Welcome)	1,740	10,523
108	Hwy. 17 — Hwy. 639 (Quirke Lake)	29,832	103,924
112	Hwy. 11 — Hwy. 66 (Swastika)	5,225	38,896
115	Newcastle — Peterborough	32,172	69,282
117	Jct. Hwy. 11 — To Jct. 35	2,406	169,944
118	Dorset — Hwy. 69	1,029,611	90,678
121	Hwy. 28 — Hwy. 35 (S. of Fenelon Falls)	1,308,020	536,232
122	QEW (Oakville) — QEW (N. of Clarkson)	47,121	—
123	Hwy. 11 — (North Bay Airport)	—	943
124	Sundridge — Parry Sound	789,789	221,203
125	Hwy. 105 — Red Lake	8,678	21,754
126	Hwy. 401 — Hwy. 2 (London)	623	37,316
127	Maynooth — Hwy. 60 (E. of Whitney)	21,208	83,947
129	Thessalon — Chapleau	1,204,308	572,657
130	Port Arthur — Hwy. 61	18,641	29,954
132	Renfrew — Hwy. 41	—	71,643
133	Hwy. 33 (Millhaven) — Hwy. 401	—	24,119
135	Hwy. 401 — Hwy. 2 (London)	—	423,595
136	Hwy. 24 — Orangeville	—	52,991
137	Hwy. 401 — Thousand Islands Bridge	246	16,000
138	Cornwall — Monkland	946,547	101,375
140	Hwy. 3 (Port Colborne) — Hwy. 20	29,282	88,579
141	Hayes Corners — Hwy. 69 to Jct. Hwy. 11	29,627	137,114
144	Sudbury — Hwy. 101	1,589,988	739,987
400	Toronto — Hwy. 12 (Coldwater)	471,028	1,436,705

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
401	(MCF) Quebec Boundary — Windsor	\$ 30,211,663	\$ 7,426,526
402	Hwy. 7 — Blue Water Bridge	3,649,254	37,901
403	Burlington — Brantford	2,225,122	522,347
404	Toronto — Hwys. 7 & 12	6,095,699	36,725
405	QEW — International Bridge (Queenston)	—	70,853
406	Hwys. 20 & 58 — QEW	24,279	79,857
407	Hwys. 35 & 115 — Hwy. 27	12,382,710	—
409	Belfield Expressway, Hwy. 401 — International Airport	2,743,665	—
410	Hwy. 401 — Hwy. 7 (Brampton)	43,457	—
416	Johnstown — Ottawa	352,099	—
417	Quebec Boundary — Ottawa	23,788,611	706,318
420	QEW Rainbow Bridge (Niagara Falls)	64,960	45,295
427	QEW — Hwy. 401	1,543,825	412,649
451	QEW , Toronto — Fort Erie	14,679,951	2,761,139
458	Ottawa — Queensway	554,357	186,381

SECONDARY HIGHWAYS

500	Denbigh — Bancroft	\$ 31,742	\$ 233,972
502	Napanee — Marysville	30,518	—
503	Tory Hill — Kirkfield	140,145	293,385
504	Hwy. 620 — Apsley	21,695	52,598
505	Hwy. 46 — Uphill	13,385	47,321
506	Plevna — Hwy. 41	—	68,151
507	Hwy. 28 (Lakefield) — Hwy. 503	172,191	134,409
508	Barnstown — Black Donald Mines	217	97,818
509	Hwy. 7 — Snow Road Station	8,253	46,326
510	Magnetawan — Hwy. 124	—	6,845
511	Brightside — Hwy. 508	11,335	100,263
512	Eganville — Hwy. 60	100,472	142,734
513	Hwy. 132 — East of Hyndford	—	49,226
515	Hwy. 512 — Combermere	104,766	124,529
517	Twp. Rd. (near New Carlow) — Hwy. 62	1,216	57,744
518	Sand Lake — Hwy. 69	151,145	349,657
519	Hwy. 121 — Redstone Lake	582,864	141,326
520	Burk's Falls — Ardbeg	75,792	157,916
522	Hwy. 11 — West of Loring	997,634	176,957
523	Lyell Twp. Line — Hwy. 60	14,699	61,076
524	Hwy. 522 — Hwy. 534 (E. of Restoule)	—	16,621
526	Hwy. 69 — W. of Britt	467,711	9,193

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
528	Wolseley Bay — Hwy. 64	\$ —	\$ 67,538
528 A	Pine Cove Landing — Hwy. 528	20,162	20,274
529	Hwy. 69 — Hwy. 69 (Magnetawan River)	9,146	98,561
529 A	Hwy. 529 — Bayfield Wharf	—	11,991
530	Hwy. 519 — Hwy. 35 (Carnarvon)	315	47,914
531	Bonfield — Hwy. 17	—	7,275
532	Hwy. 11 (South of Bracebridge) — Hwy. 69	36,780	—
533	Mattawa — Hwy. 63	—	107,438
534	Powassan — Restoule	804,952	94,907
535	Hwy. 64 — Riviere Veuve	859,043	106,818
536	Hwy. 17 — Creighton	—	15,188
537	Hwy. 69 — Hwy. 17 (Wahnapiatae)	255,706	75,668
538	Algoma Mines Loop	—	13,464
539	Hwy. 64 — Warren	17,555	166,892
539 A	Hwy. 539 — Tertiary Road 805	—	17,770
540	Little Current — Meldrum Bay	1,195,963	368,149
540 A	Hwy. 540 — Barrie Island	—	15,218
540 B	Gore Bay — Hwy. 540	—	18,869
541	Sudbury — Skead	1,166,569	65,553
541 A	Falconbridge — Hwy. 541	—	7,595
542	Hwy. 68 — Gore Bay	145,381	239,515
542 A	Hwy. 542 — Tehkummah	—	9,130
543	Long Lake — Sudbury	—	22,383
544	Levack — Hwy. 144	—	6,795
545	Hwy. 541 — Milnet	265,650	65,952
546	Hwy. 17 — Mississagai Provincial Park	238,491	171,529
547	Hwy. 101 — Hawk Jct.	12,199	12,603
548	Hilton Beach — Hwy. 17	431,759	160,851
549	Lake Panache — Hwy. 17	29,942	37,482
550	Sault Ste. Marie — Gross Cap	—	21,557
551	Province Bay — Hwy. 540	40,528	86,265
552	Hwy. 556 — Twp. Rd. (East of Hwy. 17)	9,497	38,470
552 A	Hwy. 552 — Hwy. 17	—	3,317
553	Massey — Richie Falls Camp	52,322	255,287
554	Hwy. 546 — Hwy. 129	56,869	37,688
555	Magog Lake — Hwy. 557	14,738	26,383
556	Hwy. 17 (Heyden) N. Easterly	130,614	92,610
557	Blind River Northerly	164,888	47,671
558	Haileybury — Montreal River	551	54,005
559	Hwy. 69 Nobel — Hwy. 69	440	73,192
560	Hwy. 11 — Hwy. 144 (S. of Gogama)	379,931	475,335
560 A	Westree — Hwy. 560	—	20,502
561	Bruce Mines — Hwy. 638	—	49,605
562	Hwy. 11 (E. of Thornloe) — Hwy. 65	—	28,232

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
563	Batchawana — Hwy. 17	\$ —	\$ 12,168
564	Blanche River Bridge — Hwy. 112	—	21,963
565	Pte. Aux Pins — Hwy. 550	—	3,317
566	Matachewan — Ashley Mine	—	91,934
567	E. of Silver Centre — N. Cobalt	5,479	70,369
568	Hwy. 11 — Kenogami	28,814	4,811
569	Hwy. 11 — Hwy. 11 (S. of Englehart)	21,068	55,314
570	Sesekinika — Hwy. 11	—	5,959
571	Hwy. 562 — Earlton	—	11,293
572	Hwy. 11 Ramore — Hwy. 101	43,763	33,851
573	Charlton — Hwy. 11	—	37,956
574	Cochrane — Norembega	167,197	58,685
575	Jct. Hwy. 17 to Jct. Hwy. 64	—	65,683
576	Hwy. 101 — Kam-Kotia Mine	—	48,620
577	Hwy. 101 — Iroquois Falls	339,169	48,124
578	Iroquois Falls — Hwy. 11	434	16,480
579	Cochrane — Gardiner	3,112	71,063
580	Hwy. 11 — Lake Nipigon	—	20,250
581	Hwy. 11 — Remi Lake	—	10,313
582	Hurkett — Hwy. 17	—	10,653
583	Mead — Lac Ste. Therese	312,570	117,302
584	Hardrock Mine — Nakina	5,625	227,898
585	Hwy. 11 — Pine Portage	—	66,948
586	Hwy. 11 — Lower Shebandowan Lake	—	8,678
587	Silver Islet — Hwys. 11 & 17	3,762	76,078
588	Stanley — Round Lake Road	23,391	124,304
589	Hwys. 11A & 17A — Dog Lake Rd.	146,620	52,262
590	Hwy. 130 — Hwy. 588 (Nolalu)	678,316	68,223
591	Hwy. 589 northerly	1,663	12,887
592	Hwy. 11 (Novar) — Hwy. 11	26,682	78,070
593	Hwy. 61 — Hwy. 588 (Nolalu)	97,310	188,512
594	Dryden — Hwy. 17	29,379	72,064
595	Hwy. 597 — Hwy. 590	84,867	72,939
596	Kenora — N. of Minaki	362,395	78,838
597	Pardee — Hwy. 608	15,276	47,022
598	Hwy. 604 — Hwy. 128 (N. of Kenora)	—	7,081
599	Ignace — Tertiary Road 808	2,397,008	827,445
600	Hwy. 71 — Rainy River	7,762	357,299
601	Hwy. 17 — Dryden	8,323	62,806
602	Fort Frances — Emo	16,861	71,556
603	Hwy. 17 — Dymont	—	7,048
604	Hwy. 17 — Kenora Airport	943,516	14,152
605	Hwy. 17 — Rugby Lake	15,352	27,710
606	Hwy. 17 — Markstay	150	3,996

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
607	Hwy. 69 (Big Wood) — Hwy. 64	\$ 32,737	\$ 30,710
607 A	French River — Hwy. 607	—	7,507
608	Hwy. 61 — Hwy. 595 (S. Gillies)	70,314	65,912
609	Hwy. 105 — Clay Lake	—	31,916
610	Hwy. 67 — Hwy. 101 (Hoyle)	—	43,675
611	Hwy. 602 (Sherwood) Northerly	157	40,470
612	Hwy. 103 (Mactier) — Hwy 69	—	16,473
613	Hwy. 602 — Lake Despair	41,385	84,412
614	Hwy. 17 — Manitouwadge	—	120,716
615	Hwy. 17 — Burditt Lake	20,289	42,072
616	Hwy. 101 — Palomar	—	6,274
617	Hwy. 11 (Stratton) — Hwy. 600	—	46,627
618	Red Lake — Madsen	1,035	18,734
619	Hwy. 11 (Pinewood) — Hwy. 621	31,363	165,735
620	Hwy. 62 — Hwy. 28 (Apsley)	13,522	121,570
620 A	Hwy. 62 — Hwy. 28	—	2,009
621	Hwy. 11 — Lake of the Woods	20,780	86,888
622	Hwy. 11 — (Atikokan) Northerly	13,089	19,985
623	Hwy. 11 — Sapawe	—	8,153
624	Hwy. 11 — Larder Lake	3,462	81,244
625	Caramat — Hwy. 11	—	65,331
626	Matheson — Porquis Jct.	—	81,764
627	Heron Bay — Hwy. 17	—	17,246
628	Red Rock — Hwys. 11 & 17	—	11,570
629	Timmins — Timmins Airport	—	19,761
630	Kiosk — Hwy. 17	336,850	90,743
631	South of Hornepayne — Hwy. 11	551,286	356,997
632	Hwy. 118 — Rosseau	345	29,661
633	Hwy. 11 — Kawene	—	9,730
634	Val Caron — Hwy. 144	33,552	44,767
635	Hwy. 17 — Ottawa River Bridge	—	5,210
636	Hwy. 11 — Frederick House	—	9,987
637	Hwy. 69 — Killarney	95,915	196,042
638	Dunns Valley — Echo Bay	128,291	86,594
639	Hwy. 108 — Hwy. 546	—	57,159
640	Hwy. 571 — Earlton Airport Entrance	—	5,332
641	Hwy. 17 — Pellatt	52,851	26,993
642	Alcona — Sioux Lookout	579,069	150,733
643	Hwy. 584 — Twp. Road to Cavell	1,052	36,608
644	Hwy. 69 (Pte. Au Baril) Easterly	869	2,398
645	Hwy. 529 — Bing Inlet	—	15,695
646	Pickle-Crow — Central Patricia	—	31,311
647	Hwy. 17 — Blue Lake Provincial Park	—	16,128
648	Dyno Mine — West Jct. Hwy. 121	15,022	131,619
649	Bobcaygeon — Hwy. 121	413	43,524
650	ONR Right-of-Way — Hwy. 112	1,854	14,742
651	Hwy. 101 — Missanabie	135,261	124,256
652	Wade Lake — Hwy. 574	—	35,858
653	Portage Du Fonte Bridge — Hwy. 17	457,166	29,319
654	Hwy. 11 — Nipissing	9,431	54,806

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
655	Timmins — Ward Kidd Twp. Boundary	\$ —	\$ 42,031
656	Hwy. 533 Northerly	—	3,885
657	Gold Pines — Hwy. 105	—	9,565
658	Hwy. 17 — Fairbank Provincial Park	—	59,256
659	Hwy. 604 — Hwy. 128	39,993	37,542
660	Bala — Hwy. 103	351,213	57,527
661	Gogama — Hwy. 144	—	10,666
663	Hwy. 11 (W. of Hearst) Northerly	63,957	11,344
664	Hudson to Jct. Hwy. 72	6,591	27,544
665	Jct. Hwy. 17 to Richan	45,551	49,978
666	Kenora to Redditt	170,299	56,002

TERTIARY ROADS

800	Hwys. 11 & 17 — Cheeseman Lake	\$ —	\$ 168,547
801	Hwy. 11 — Namewaninkan River	—	12,296
802	Hwy. 11 — Burchell Lake	—	11,976
803	Hwy. 575 (Hwy. 101 — 3 miles south)	—	7,204
804	Hwy. 105 — Lower Manitou Falls	—	25,027
805	Hwy. 539A (River Valley) — Pond Lake	23,905	85,985
806	Hwy. 545 — Sellwood	—	10,229
807	Smooth Rock Falls — Fraserdale	—	163,583
808	Hwy. 646 — Otokwin River	—	126,188
809	From Hwy. 564 to end of Hwy.	—	7,684
812	Manitou Rd. — Hwy. 11 Northerly	1,093,618	—

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ANNUAL REPORT 1975-6



Ontario

Ministry of
Transportation and
Communications

24-01 DT
- 1976

ANNUAL REPORT

For the
fiscal year
ending
March 31, 1976



Ministry of
Transportation and
Communications



Office of the
Minister

Ministry of
Transportation and
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

TO THE HONOURABLE PAULINE M. McGIBBON, O.D.,
B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before
you the Annual Report for the Ministry of
Transportation and Communications for the fiscal
year ending March 31, 1976.

Respectfully submitted

A handwritten signature in dark ink, appearing to read "James Snow".

James Snow,
Minister.



Ministry of
Transportation &
Communications

416/248-3604

East Building
Downsview Ontario

TO THE HONOURABLE JAMES SNOW

Minister of Transportation and Communications, Ontario

Sir:

I have the honour to present the report of the activities of the Ministry of Transportation and Communications for the fiscal year ending March 31, 1976.

Respectfully submitted

A handwritten signature in cursive script that reads "Harold Gilbert".

Harold Gilbert,
Deputy Minister.

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DEPUTY MINISTER'S SUMMARY

This past fiscal year, the Ministry continued to meet its commitments to the people of Ontario for transportation and communications services in spite of fiscal constraints.

And while the Ministry is looking at the development of widely-diversified modes of transportation with a view toward meeting the varying needs in different areas of the province, highways continued to be the overall basic mode of transportation for the efficient movement of people and goods. Thus, because of their high priority, \$280.5 million was spent on construction and \$105 million on maintenance.

Transit development also came in for a good share of the Ministry budget in recognition of the effective role it plays in the overall transportation picture.

Through the transit subsidy program, \$80 million was granted to Ontario municipalities to improve their transit facilities. A further \$55 million was allocated to Metro Toronto to assist in the expansion of its subway system.

Further development of GO Train and GO Bus services was also part of the transit program. GO Train service was expanded by the addition of an extra express to Oakville that proceeds on to Hamilton along the Lakeshore run. A fourth train on the Northwestern run to Georgetown was also added.

In addition, new GO Bus runs were initiated to the Markham, Milton-Streetsville and Georgetown-Brampton areas.

Ferry service was also improved with the addition of the Wolfe Islander III to the Ministry's fleet. The 200-foot vessel was designed to transport 50 vehicles and more than 300 passengers.

Like most of the ferries in the fleet, it is a major tourist attraction as well as an important connecting link between Kingston and Wolfe Island.

Another facet of the transportation picture is provided by the provincially-sponsored air commuter service, norOntair. It links 16 northern communities and provides connections to scheduled commercial flights at six locations.

Subsidies were also provided for the completion of improvements to four municipal airports as MTC's share toward the further development of our northern air services.

In addition, another all-weather airstrip was completed at Pikangikum providing year-round access to these remote communities.

The north was also a major concern in the development of communication services.

Work continues on a system of microwave towers which will provide standard telephone service to 24 isolated communities by the end of 1977.

With more and more people on the move in Ontario, special measures were taken to make this mobility safer.

Legislation was passed at the beginning of the year to cover both the mandatory use of seat belts and the lowering of speed limits on all provincially-controlled highways.

New laws were also introduced for motorcyclists, moped drivers and operators of motorized snow vehicles. And regulations were passed requiring motorists to stop in both directions when the red lights are flashing on a school bus.

The Ministry also continued its program of motor vehicle testing and inspection to ensure that both drivers and vehicles meet prescribed standards.

And a first for Canada was the introduction of drivers licences with an optional legal declaration section covering the donation of human organs.

The following is a summary of expenditures reported by the Financial Comptroller for the fiscal year 1975/76 with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	March 31, 1975	March 31, 1976
Ministry Administration	\$ 22,083,158	\$ 24,296,490
Planning Research and Development	17,608,557	18,153,651
Safety and Regulation	19,435,024	24,963,478
Provincial Roads	406,406,827	435,491,576
Provincial Transit	19,488,338	28,151,517
Air	1,929,616	3,328,604
Municipal Roads	245,646,958	288,290,347
Municipal Transit	77,862,248	139,821,996
Communications	1,470,507	1,886,746
TOTAL GROSS EXPENDITURE	\$ 811,931,233	\$ 964,384,405

DEPUTY MINISTER'S OFFICE

OFFICE OF THE WOMEN'S CO-ORDINATOR

In November of 1974, the Deputy Minister appointed a part time Women's Co-ordinator to establish the Equal Opportunity Program, and assess the need for a full time co-ordinator. In April, 1975, a full time administrative assistant was assigned to the program in order to carry out the many responsibilities of the Women's Co-ordinator's Office.

Throughout the year, Career Development Workshops were offered to head office and regional women employees. Approximately 300 women have attended through the 1975/76 fiscal year. In addition, Career Planning Talks were offered at lunch time covering a wide variety of careers and professions; a series of films was offered for lunch time viewing; personal counselling was provided to all employees who contacted the Office of the Women's Co-ordinator and monitoring of competitions was undertaken.

In February, 1976, a full time Women's Co-ordinator was appointed to the program. The major efforts since that time and for the short term future are:

- development of an Affirmative Action Plan for MTC;
- organizing Management Awareness Seminars for all levels of management;
- establishment of an Affirmative Action Council;

- organizing an Affirmative Action Representatives' Conference for all women elected unit representatives.

Other plans include the continuation of lunch time activities, carrying out employee surveys on different matters of interest, and all such projects as identified by the Affirmative Action Council.

STRATEGIC POLICY SECRETARIAT

The Strategic Policy Secretariat was formed on January 1, 1976.

The responsibilities of the Secretariat are:

- to provide support services to the management committees of the Ministry. This involves the organization of committee business, maintaining continuous contact with the staff of the Cabinet Committee on Resources Development, Management Board and Cabinet.
- to engage in developing and implementing an integrated policy development and planning process for the Ministry. This process will ensure that decisions throughout the Ministry are made with full knowledge of government and Ministry policy. It will provide that decisions made are reflected in all long-range and annual planning processes within the Ministry and that the results of programs are monitored and assessed

from the viewpoint of physical performance and achievement of the expected benefits.

- to maintain continuous liaison with the agencies of the Ministry, other Ministries, central agencies, other governments (federal, provincial, municipal), industries affected by the activities of the Ministry, and users of the services provided by the Ministry.
- for identifying concerns and issues arising from external sources. Such sources include economic and social conditions and trends, the expectations of associations, industries and the public, as well as the stated policies and directives of government. The Secretariat is responsible for the assessment of the impact of such concerns and issues on the Ministry and to document and bring forward their findings for consideration by Ministry management.

COMMUNICATIONS DIVISION

The communications goal of the Government of Ontario is to ensure that the diverse interests of the people of Ontario are fully represented in the developments associated with radio and television broadcasting, educational broadcasting, cable and special purpose video, data transmission systems, telephone and telegraph services and the use of communications satellites.

The Communications Division is responsible for developing and administering communications policies which respond to the communications goal of the Government of Ontario.

During the fiscal year, the Communications Division undertook a wide range of activities:

- development of Ontario communications policies;
- negotiations with the federal government on the legislative and regulatory frameworks under which communications systems operate;
- participated in the Federal-Provincial Conference of Communications Ministers in Ottawa, May 12-14, 1975 which was reconvened on July 15-16;
- worked with the industry, other provincial agencies and federal government to improve basic broadcasting and cable television services in northern Ontario;
- proceeded with Bell Canada in a joint project to provide basic reliable telecommunications services in the remote areas of northwestern Ontario and with Ontario Northland Transportation Commission to improve service to communities along the coasts of James and Hudson Bays;
- developed program for provision of electrical power generation to serve the remote communications system;
- provided telecommunications expertise involving system design, co-ordination and supervision of operation of the pilot traffic surveillance project on the Queen Elizabeth Way;
- represented the province in interventions before the Telecommunications Committee of the Canadian Transport Commission in rate applications by Bell Canada and CN/CP Telecommunications;
- represented the province before the Canadian Radio-Television Commission related to cable and broadcast policy matters;
- worked closely with the federal Department of Communications in developing technical standards and an implementation program for terminal interconnection of certain devices to the public switched telephone network;
- ongoing development of plans and policies related to the future of computer communications in Ontario with special emphasis on evaluation of proposals for an Electronic Funds Transfer System in conjunction with the Ministry of the Attorney General;

- provided financial, technical, legal and economic support to the Ontario Telephone Service Commission in its regulatory activities and engineering assistance to the 39 independent telephone companies regulated by the Commission.

The Communications Division comprises two branches, Policy Development and Common Carriers, and the Telecommunications Systems Engineering Office.

PRIORITY DEVELOPMENT BRANCH

This branch is responsible for the development and management of current and long-range capital construction programs of the

Ministry, and for ensuring maximum effectiveness of the legislated funds to be expended. Long-range programs for proposed transportation systems are developed by a priority methodology which analyses and recommends viable programs within financial and planning period limits.

The Advance Program consisted of 2,736 projects at the end of the fiscal year; of these, 377 were added during the year. Approximately 991 groups of projects had active pre-engineering schedules. During the year, 130 contracts were awarded. An additional seven contracts were advertised, of which one was non-awarded and six cancelled during the advertising period.

PLANNING, RESEARCH AND DEVELOPMENT

PLANNING DIVISION

The role of the Planning Division in the Ministry is to prepare long and short-term transportation plans for regional and urban areas of Ontario. These transportation plans cover all modes and provide leadership and guidance to all municipalities.

These responsibilities are shared by the Systems Planning Branch, the Project Planning Branch and the Economic Policy Office.

SYSTEMS PLANNING BRANCH

The responsibilities of this branch are as follows:

- To evaluate and recommend policy positions on the standards of service for the transportation program of the Ministry and develop the information gathering system to apply these standards.
- To forecast future demand for transportation service.
- To evaluate and recommend policy positions on the objectives and level of investment for each program in relation to past performance; physical and operating conditions, existing and forecast; social, economic and technological change and provincial goals.
- To develop solutions to specific transportation problems of an intermodal or interjurisdictional nature.

- To evaluate the transportation impacts of provincial development goals and specific development objectives.

Brief summaries of activities of the three offices engaged in this work are given below:

Municipal Planning Office

This office administers urban transportation planning and road needs studies for both Ministry and municipal purposes.

Urban planning studies have included analysis of demand for proposed transit and commuter rail systems in Metropolitan Toronto and surrounding municipalities. The simplified transportation planning computer program package was developed for use by the larger municipalities in the province.

Assistance has been provided for municipal transportation planning studies in Brantford, Oakville, Regional Durham, Regional Halton and Metropolitan Toronto. These studies evaluate alternative urban development plans and multi-modal transportation systems.

Municipal Roads Needs Studies were started in 68 of a possible 126 of the largest spending municipalities. They will assist the Ministry in establishing an equitable system of allocating funds to these municipalities for road purposes.

The Regional Municipalities of Durham, Peel, Waterloo, Hamilton-Wentworth and Halton have completed Roads Needs Studies,

as a first step towards the adoption of desirable regional road systems.

This office has also participated in the establishment of a provincial policy on railway relocation studies. Five pilot studies (Brantford, Niagara Falls, North Bay, St. Thomas and Sudbury) are now under discussion.

PROJECT PLANNING BRANCH

This branch develops comprehensive planning of transportation corridors for all modes in the provincial transportation system, using as a base the broader planning framework developed by the Systems Planning Branch. The phase in the planning process studies the feasibility of various alternative transportation links, giving full consideration to the social, economic and environmental effects of each alternative on the area in addition to engineering and cost considerations.

Public participation is organized as a part of the planning process. Leadership and guidance is given to municipalities in the planning of public transportation and the development of new transportation concepts.

Studies and planning related to the environment play a big part in Ministry activities. Teams of specialists from this branch investigate all possible effects of Ministry projects on surrounding areas and its inhabitants. This includes consideration from conservation of landscape, forests, waterways and communities — assures, in short, that while transportation facilities must be constructed where needed, they will be planned and built with the least possible disruption to people and the balance of nature.

Brief summaries of activities of the three offices engaged in this work are given below:

Route Projects Planning Office

Several major highway route planning studies were completed which took into account a full range of social, environmental, economic and engineering factors and also allowed for public involvement through public participation programs.

An increasing emphasis has been given during the last year to the planning activities

of other Ministries and agencies. Office staff have provided a high level of external input to these studies by others, such as on the Parkway Belt studies and Ontario Hydro transmission line location studies.

Environmental Office

The Land Management Section continued its review function of various land developments and land use proposals, submitted from throughout the province. In addition, this section also develops and implements policy guidelines for the above program. The administration of land severances for this Ministry has recently been regionalized.

The Environmental Section continued its role of providing the environmental component at the route project planning level.

At the design level, the section continued to expand its activities by increasing its involvement in projects in design and by intensifying efforts in the identification of the type and sensitivity of environmental impacts. Staff was assigned to design projects consistent with the identified potential sensitivity and timing priorities of the project. Efforts were expended in the development of suitable and appropriate measures to ameliorate identified environmental problems.

During the past year, a program was developed to increase the awareness of personnel at the field supervisory level of the Ministry's environmental objectives with particular emphasis on job specific examples. The purpose of this program is to assist field supervisory staff in the identification of potential environmental impacts and ways in which these potential impacts might be avoided or minimized.

Near year-end, discussions with the Ontario Road Builders Association resulted in the initiation of a program to make the contracting industry more aware of the Ministry's environmental objectives by illustrating potential and actual environmental impacts related to construction operations.

Considerable emphasis has been placed on reviewing projects on the advance program with regard to the requirements of the Environmental Assessment Act. This has resulted in considerable dialogue with the

Ministry of the Environment in the definition of procedures and categorization of projects consistent with the requirements of the Environmental Assessment Act.

Transit Projects Planning Office

This office has continued to discharge its primary role in the field of short term public transportation planning, policy development and innovative strategy development and experimentation for municipal and provincial transit and for air services and airport development. Within the field of ministerial responsibility, close co-ordination of relative activities exists with Municipal Transportation Branch, Municipal Planning Office, Toronto Area Transit Operating Authority and Ontario Northland Transportation Commission.

Program activities consisted of:

- **Financial Assistance and Policy Development** — Ongoing analysis of municipal transit systems performance contributed to the establishment of funding levels for 1976 and to the ongoing design of performance standards for future applications. Alternative policies for transit assistance to the physically handicapped and for provincial transit were submitted. Investigations with respect to school bussing rationalization is continuing.
- **Municipal Transit Planning** — Financial and technical assistance has been provided to 22 municipalities for bus rapid transit and related planning studies.
- **Municipal Transit Development and Demonstration** — Strategies are under development with municipal assistance covering ten projects. Emphasis was mainly in the area of software and management strategies.
- **Provincial Transit Systems Planning** — Monitoring surveys for GO Transit and planning and implementation studies for new services to Streetsville/Milton were undertaken. A major effort directed at identifying practical opportunities for public transportation in the Toronto area co-ordinated with regional and provincial objectives was initiated.

- **Northern Air Program** — Ongoing responsibilities in airport and air service development included design assistance, standards development, policy review and systems planning. One remote airport and four municipal airports were completed this year under the Air Program. In addition, nine communities were added to the norOntair air service network.

- **Southern Air Policy Development** — A major Local and Feeder Air Transportation Study for southern Ontario was completed with policies for community airports and local and feeder air services submitted.

Systems Analysis Office

The function of this office is to recommend the allocation of resources for all Ministry programs, and to manage a provincial highway data storage and retrieval system.

The Systems Priority Development Section completed a review of fund allocation for the provincial road systems and the county and regional municipal road systems. A study was completed on the impact of the current energy situation on the Ministry programs. A start has been made on an investigation into different ways of measuring congestion.

Transportation Characteristics has been decentralized to the extent possible in the three southern regions, in order to relate more closely to the design function of the regions. The head office function of this group will continue to be related to overall provincial policy of measuring and evaluating traffic and travel patterns, and the publication of the volume and accident rates for the provincial roads network.

The Land Use Group has reviewed land use allocation to large areas of the province, for provincial transportation planning purposes, has assisted Metropolitan Toronto in the planning of major road and transit routes, and has reviewed and commented on draft official plans throughout the province.

The Specific Studies Group continued to make traffic forecasts for specific design purposes in the regions and head office.

The Reference and Information Systems Section continued to manage the update of the inventory systems on the King's, Secondary and Tertiary Highways, with summary reports of deficiencies and construction improvement needs being produced to facilitate the setting of objectives and the measurement of accomplishment and performance. The new linear reference system was further developed and prepared for application to the various types of linear data, such as accidents, traffic volumes and the highway inventory.

Computer Development Liaison placed emphasis on documentation procedures, and provision of courses to provide instruction to some 30 persons.

The Graphical Design Group continued to provide its services for the Planning Division.

Regional Transportation Planning Office

This office supports the programs of this Ministry and those of other Ministries and agencies by carrying out long and short-term studies on the multi-modal transportation systems throughout Ontario.

The office is organized into four separate sections each specializing in particular economic planning regions of the province.

Central Ontario East — A project to merge weekday origin-destination trip data of the earlier study areas with that from other available sources into composite trip tables was completed. A similar project was undertaken for the summer Sunday trips. Other significant work included the preparation of traffic data for the Priority Development Branch in testing the priorities of proposed new highway links and major capacity improvements to existing facilities in the region.

Central Ontario West — The examination of long-range transportation needs in the Niagara Peninsula was brought closer to completion, while at the same time specific issues were also investigated. Of particular interest was the continued participation in the planning of the Haldimand-Norfolk Region.

Northeastern and Northwestern Ontario — Along with issue-oriented investigations of northern Ontario, a major transportation planning study for the Thunder Bay District was completed for which both public and technical reports were released. Investigations to solidify the policies for services into the remote sections of Ontario are now underway.

Southeastern and Southwestern Ontario — Continued emphasis was placed on updating of a multi-modal transportation planning data base. The Windsor-Sarnia Corridor Study dealing with provincial transportation issues in Essex, Kent and Lambton counties was completed. Increased efforts have been directed to the development of intercity public ground transportation policies. A review of intercity bus and rail services in southwestern Ontario is nearing completion.

Economic Policy Office

The Economic Policy Office examined the possibility of using ferry roll-on/roll-off services on the Great Lakes, in an attempt to lessen highway congestion in the most heavily used land corridors. Several marine companies have expressed interest in pursuing this concept further.

In co-ordination with other areas of the Ministry, studies were undertaken on aviation marketing, the air freight industry, inter-provincial truck reciprocity, the Inter-city bus industry, oil recycling and the possibilities of developing a province-wide freight forecasting model.

Two staff members were seconded to the Canadian International Development Agency for a project to assist the Government of Kenya in preparing a multi-year road program. This exercise is expected to yield valuable insights into the techniques used by the World Bank Group in allocating scarce resources.

Many small shippers in Ontario were provided with advice on how their transportation costs could be reduced by making better use of the options available to them from the carrier industry.

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division is comprised of four units: Executive Section, Engineering Research and Development Branch, Systems Research and Development Branch, and the Management, Information and Testing Systems Unit.

ENGINEERING RESEARCH AND DEVELOPMENT BRANCH

This branch is mainly concerned with physical research in five main areas: pavements, structures, materials and quality assurance, earth sciences and environmental impacts and special technologies. A group was established to study problems of engineering economics related to transportation and to integrate value engineering concepts into the findings of all research and development projects. In addition, the branch is responsible for co-ordinating the Ministry's metric conversion program in conformity with the national target dates of September 1977 for changing road signs and April 1979 for starting metric construction.

Major advances during the year were made in developing pavement management systems and in evaluating techniques for improving skid resistance. This work included the continual monitoring of trials on the Toronto Bypass (Highway 401) to develop safe cost effective methods of restoring worn pavements while minimizing adverse noise generation. The problem of improving the durability of bridge decks in the adverse environment of heavy traffic and winter maintenance was investigated both to achieve more durable new construction and to rehabilitate existing bridges. A number of bridges were also tested to determine their safe load capacity. Through such testing many bridges otherwise scheduled for replacement can continue in service with only selective and much less costly repairs.

A notable achievement was the confirmation of many new ideas in bridge design and construction by the testing of a prototype bridge on Highway 85 over the Conestoga River. This success is now leading to the development of a Highway Bridge Design

Code for Ontario which will permit more economical and pleasing structures to be built.

SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

The responsibility of this branch is to optimise the operational efficiency, safety, comfort, convenience and public acceptability of the provincial transportation systems.

During the year, two major projects were directed towards increasing the use of public transportation and the conservation of energy related to transportation systems.

A major research program into the safety and handling of commercial articulated vehicles is well underway. A fully instrumented tractor, semi and pup trailers have been purchased for full scale dynamic testing at Downsview Canadian Forces Base beginning in May. A joint research project with the Ministry of Transport has been initiated to study the effectiveness of anti-jackknife devices to reduce jackknifing and trailer swing. The dynamics of the driver as part of the total system is also under investigation.

Also related to the safety of the large commercial vehicles is the development of instruments for the measurement and evaluation of their brake performance and operating condition.

These will shortly be in operation by the field inspectors. One project concerns the development and implementation of a computerized freeway surveillance and control system for a six-mile section of the Queen Elizabeth Way just west of Toronto. Another involves the development of a municipal traffic control system concept for application to mid-sized and smaller communities in Ontario. Research on traffic flow simulation models is being carried out to support these and other projects.

In a co-operative effort with the Ontario Ministry of Energy, several important projects are in progress dealing with the problem of motor vehicle fuel conservation. These have involved the development of instrumentation and procedures for measuring, evaluating and improving fuel economy for both cars and trucks.

A comprehensive report on the command and control aspects of rapid rail transit is in preparation.

Transit Systems

The Near-Term Light Rail Transit Program completed the draft functional specification for an LRT system which meets the Intermediate Capacity Transit System requirements in the cities of Ontario. The program also includes assisting the Scarborough Light Rail Transit Project. In support of this project, the Transit Systems Research and Development area undertook a noise impact assessment study which involved ambient noise measurements along the transit route, design of the impact assessment methodology, prediction of LRT generated noise, recommendation of noise standards for the community and recommendation of noise control resources.

Additional studies that were carried out in support of the Scarborough LRT Transit line include: vehicle/system compatibility, design guidelines, arterial road and LRT signalling options and the impact of various system features on operational and capital costs.

Three major infrastructure activities began during the year including a study of an elevated guideway concept, undertaken at the request of the TTC, which has been used as a basis for some Scarborough LRT line options. A study of existing transit structural design codes was undertaken, and a first draft for a concrete transit guideway structural code was prepared for the American Concrete Institute Committee 443. In addition an investigation of the effect of curve geometrics on transit vehicle dynamics was undertaken.

Mechanical engineering projects continued on railway noise and railway-truck dynamics. Several types of railway wheels were tested for their vibratory properties to obtain fundamental data on wheel behaviour. This information has been qualitatively verified against experimental noise data on subway and street cars. In addition a finite element model of railway wheels was derived and verified experimentally. The information gained has been used to design prototype railway wheels which should have improved acoustical properties.

Work on lateral vehicle dynamics continued with two general purpose computer programs being made available to the industry for design purposes. A study on the lateral stability and curving trade-off was completed. This investigation concluded that a steering truck is desirable for urban applications. A study on vertical dynamics was completed with a major conclusion being that wheel-set mass is the largest contributor to wheel/rail forces.

A machine for simulating wheel/rail interaction was taken from the concept to preliminary design stage. Work will continue in fiscal year 1976/77 with the emphasis on wheel/rail noise.

Electrical studies were begun on electric motor performance and a propulsion system design rationale project was implemented to develop a rationale for selecting the propulsion power for a particular transit vehicle encompassing a resultant cost benefit analysis of capital equipment, energy, power distribution and passenger handling.

An electric road vehicles project was initiated to develop a systematic method of analysing collected data on electric vehicles to determine their reliability now and in the future.

Work on systems applications has resulted in the completion of a number of network and station simulation studies for the application of fixed guideway transit and a state of the art report was produced. Studies were also performed on the trade-offs associated with vehicle performance parameters.

Various endeavours on planning techniques included the completion of a study on alternative modal split models, the development of a Dial-a-Bus ridership prediction model and the commencement of a program to develop improved techniques for estimating ridership on transit routes and the impact of changes in service parameters such as fares and headway.

A program was begun to study bus operations and methods. A review was conducted of the Ministry's procedure for obtaining daily traffic volume estimates on provincial highways and work continued on noise impact studies.

The Advanced Rail Transit Program produced an Energy Management Study which acquired extensive capabilities in analysis by developing computer programs in: tunnel aerodynamics, transit vehicle performance, transit line simulation and transit system economic evaluation, also data base has been acquired for flywheel energy storage units, and a partial one for electrical equipment associated with propulsion and power distribution.

Two other systems-oriented studies have been conducted. One of these which is a preliminary study of the cost-effectiveness of various electrical propulsion systems, with and without regeneration, and energy storage. The other is a preliminary trade-off study on gravitational energy exchange. This study serves as a basis for a more comprehensive study which would include costs of stations and of power distribution systems.

Human and Social Factors Research

Research has continued on ways to improve public acceptance of transit. Evaluation has been completed of a transit marketing demonstration project undertaken in Kingston during 1974-5. Public awareness, changes in attitudes and influences on ridership was noted. Research is continuing to devise more effective transit marketing techniques for use by Ontario transit companies.

An assessment was made of public reaction to the introduction of Light Rail Transit into suburban Scarborough. People living near the proposed line were surveyed and were found to have a generally positive attitude to the technology. Their opinions about the technology and various land use options were given consideration during various phases of the planning for the new line.

The assessment of various Ministry programs was also a subject for research. A survey was made of public reaction to the installation of a ten-foot high privacy fence along 401 in Scarborough between Victoria Park and Warden Avenue. The fence was intended to reduce annoyance with various highway nuisances. The research revealed that while a number of annoyances had been reduced by the fence, noise remained a major

source of annoyance requiring further research.

Highway Wayside Equipment Research

Accident experience of the first crash trailer prototype has been used to further study the problems of sign truck hazards. The trailer was hit twice within three months by vehicles travelling over 50 mph. The crash trailer prevented fatalities or severe injuries, and some minor improvements were derived from evaluating these accidents. The crash cushion attachment, on the other hand, has proceeded towards trying various materials for efficiency. For this purpose a theoretical solution for a force resistance chart of a moveable barrier has been derived, against which actual materials have been tested. A cellular box of car body gage steel sheets has been found to be most promising.

Computer systems programming for road illumination has progressed towards quantifying performance parameters including disability glare and reflectance of pavement surfaces.

The work is being continued toward more convenient input with pre-selecting luminaires from a data bank and toward an economic comparison of various alternative designs. A project on discomfort glare has been initiated to obtain data for further mathematical modelling the computer program and for setting glare standards.

Photometric measurements were completed on Highway 401 Bypass test sections, studying effects of re-paving with black asphalt overlay, relamping and washing. A final report is in preparation. Photometric measurements on highway sign materials have been initiated by installing beams on a black painted wall for laboratory work, in the Reservoir Laboratory building.

A roadside accident study is near completion and a report is being prepared, to assist in priority consideration for roadside hazard removal.

Assistance was given to Systems Design in small problem solving, such as the question of dynamic stability of concrete barriers and evaluation of lighting standards proposed in

the RTAC road design manual. In response to this kind of need a project was initiated on the vibration of light poles under wind loads.

Driver Vehicle Operations Research

A major project carried out during the past year was the development and implementation of a seat belt education program. The purpose of which was to provide information on how seat belts work and related information to improve knowledge about the attitudes toward seat belts to maximize compliance with the mandatory seat belt legislation.

Through interministerial activities, this group played a major role in the preparation of the report "A Review of 'Check Stop' and the 24 Hour License Suspension", submitted to the Attorney General.

Management, Information and Testing Systems

The objectives of this unit are to provide overview management systems and testing capability for the division. This unit consists of seven areas as follows: knowledge acquisition systems; project management systems; computer management systems; equipment management systems; testing and instrument systems; testing facilities management; and technical information.

Computer Management Systems

This group ensures that the division has available, or at its disposal, computer software and hardware capability as needed in the most economical way.

During the course of the year arrangements for staff training, computer use, programming requirements, and terminal placement and removal have been handled by this group. Project needs are reviewed with each program manager to ensure that money for computer requirements is available in the budget and to ensure that things run smoothly in the computer management area.

A Committee has been formed to review the problems associated with current retrieval techniques associated with the Accident Data Files. The benefit of this work will be more

rapid access to more meaningful data which will aid in a variety of projects stemming from the interfacing with the Accident File Data Base.

Project Management Systems

The aims of this group are to set up divisional systems which will allow the division to know how projects and programs are progressing and to monitor the progress and evaluate the merits of these projects so that the best are introduced into the Ministry's operational and administrative areas.

During the year a project management system was implemented and has been utilized to monitor all projects passing through the Research and Development Division. This permits control of the progress of projects and also provides budgetary data from estimated project costs. The system is the nucleus of a total project management system for the division.

Knowledge Acquisition Systems

The aim of this group is to ensure that significant and current knowledge is readily at the disposal of the division.

During the year emphasis was placed on external retrieval capability and in particular the TRISNET system which is a computer data base containing a variety of research data accessible through a computer terminal.

The terminal is housed within the Research Division and has proved to be valuable in obtaining information for projects. Interest is now focussing on the establishment of an equivalent internal system.

Equipment Management Systems

This group ensures that all divisional needs for equipment including motorized vehicles for testing are available for project requirements.

Each project handled by the division and which passes through the project management systems has the equipment needs estimate for each fiscal year. It is the responsibility of the equipment management section to plan for and make arrangement for such equipment.

During the year a mobile laboratory was designed and placed on order and will be delivered early in the 1976-77 fiscal year. This mobile laboratory will permit the division to perform sophisticated tests in remote areas as it will allow the transport of laboratory equipment to remote sites. Plans have been developed for an equipment management system which will ensure vehicle availability along with vehicle staffing for all projects.

Technical Information

This area aims to ensure that all divisional needs for technical editing, technical writing, audio/visual presentation, graphic design services and publishing services are met.

A design program which has resulted in an organized approach to report layout based on a MATRIX Grid was implemented during the fiscal year. All of the research reports published by the Ministry were handled through this section as were internal reports of the division. Staff restraints began to impose serious limitations on in-house work and plans have been made to provide much of the design and printing services through the private sector in the next fiscal year.

The capability of the Ministry of Government Services in this regard has been fully utilized. Efforts have also been made to find faster, less expensive methods to publish all reports.

Generally speaking the MIT unit has been able to handle its commitments on all ongoing projects and to extend the practical range of each section's responsibilities so as to fulfill its total role more completely.

An embryo sound section was started which has begun work in much needed areas, where environmental impacts are important.

This group has worked closely with the Testing and Instrumentation Laboratory Unit which did the practical noise measurements needed. Close co-operation with other Ministries and agencies has been extensive.

Testing Facilities Management

This area aims to provide the proper environment and facilities for all testing associated with the broad spectrum of ministerial requirements.

The major facility available to this sector has been the Reservoir building at Downsview and arrangements were made for a number of tests to be carried out in this building. They ranged from Cathodic Protection of Bridge Decks to the testing of Transit Wheels for Vibration Modes. The Reservoir has a limited capability but plans to modify it and bring it to a more useful level were completed during the year and once the modifications have been made the Reservoir usefulness will multiply.

The Reservoir also houses a spare parts inventory and provides working space for instrumentation of mobile equipment used in a variety of work.

Technical work benches are also available for electronic and similar work.

Testing and Instrumentation Systems

This laboratory acts in a support role to the various project groups in the division. This is done by providing instrumentation together with technicians to install and operate the instruments for experimental programs.

Engineering support is also made available to assist in planning test programs, conducting tests and reporting results. The principle areas of technology provided by the laboratory are:

- Instrumentation
- Strain gauging
- Electronics
- Digital engineering
- Data acquisition systems
- Transportation noise investigation

The major projects presently using the assistance of the laboratory are:

- Bridge testing
- The axle spacing measurement of vehicles in motion
- Articulated vehicle research
- Accurate measurement of vehicle deceleration required for the vehicle braking and gas economy projects
- Also large number of noise measuring and analysing projects are being undertaken in the areas of environmental studies, noise barrier assessment, and subway wheel/rail noise research.

OPERATIONS

OPERATIONS DIVISION

CONSTRUCTION BRANCH

This branch was responsible for administering the construction program in the Province during the 1975-76 fiscal year, producing and revising contract documents and specifications, providing technical guidance and general supervision on quality control, approving contractors shop and falsework drawings, controlling construction staff and administering the Operations Division Technical Training Program.

Following are a few of the many projects undertaken:

Southwestern Region - Chatham, London, Stratford and Owen Sound Districts

Grading, drainage, granular base and five structures were completed on Highway 402, from 0.6 miles west of County Road 26 easterly to 0.6 miles west of County Road 21. On Highway 40, grading, drainage, granular base, cement treated base, hot mix paving and concrete paving, from Churchill Road southerly to Highway 80, City of Sarnia, and eastbound and westbound lanes, 0.4 miles east of Indian Road were completed.

On Highway 3, St. Thomas, the Burwell Road, First Avenue interchange underpass and Balaclava underpass were completed.

The grading, drainage, granular base, hot mix paving and structures on the Hanlon Expressway in Guelph, from Waterloo Avenue northerly to Woodlawn Road, including Imperial Road underpass were completed. On Highway 6N, from Highway 401 northerly to Hanlon Expressway, including Highway 401 underpass and Aberfoyle Creek culvert, the grading, drainage, granular base, hot mix paving and structure were completed.

On Highway 11, 3.5 miles of grading, drainage, granular base and hot mix paving were completed from the south limits of Barclay, northerly to 1.2 miles north of Stroud.

Central Region — Hamilton, Toronto and Port Hope Districts

On the QEW, the Lyons Creek Road interchange ramps including the north and south Service Roads were completed.

Highway 401, from Highway 401/427 interchange westerly to west of Dixie Road was completed. This work consisted of grading, drainage, granular base, hot mix paving, sign support structure and security fence. 1.85 miles of grading and lighting on Highway 401, Mississauga, 1st line east, westerly was completed. On Highway 48, two grading, drainage, granular base, hot mix paving and structure contracts were completed. They were from 5.2 miles north of Highway 47 northerly 7.6 miles including CNR overhead at County Road 13 at Mount Albert and 1.0

miles north of Mount Albert northerly to Baldwin Bridge.

Grading, drainage, granular base, hot mix paving and four structures were completed on Highway 7 from Highway 11 easterly for 5.0 miles. On Highway 2 from Pickering east limits, easterly for 4.1 miles, the grading, drainage, granular base and hot mix paving were completed. On Highway 409 from Highway 401 westerly for 2.3 miles, the grading, drainage, granular base, hot mix paving and structures were completed.

The grading, drainage, granular base, hot mix paving and structure were completed on 4.7 miles of Highway 28 north of Highway 401 and for 0.5 miles on Highway 106 west of Highway 28, including the Ganaraska River Bridge. On Highway 36N and Highway 649, Bobcaygeon, the grading, drainage, granular base, hot mix paving, and Big Bob Channel Bridge were completed.

Northern Region — Huntsville, Sudbury, North Bay and New Liskeard Districts

On Highway 11, grading, drainage, granular base, hot mix paving and two structures were completed from 0.3 miles north of the junction of Highway 118 southerly for 6.76 miles. On Highway 118 at Port Carling, the Indian River Bridge was completed. This work consisted of grading, drainage, granular base, hot mix paving and structure. Grading, drainage, granular base, hot mix paving on Highway 69, 0.5 miles north of Bala for 10.3 miles and on Highway 118 for 2.2 miles east of Highway 69 were completed.

On Highway 522, from 0.4 miles west of Ess Narrows to Lost Channel Road, 5.6 miles of grading, drainage and granular base were completed.

Grading, drainage, granular base and hot mix paving, were completed on Highway 11, 6.4 miles south of Highway 124 northerly for 15.8 miles.

On Highways 101 and 144, 12.9 miles of grading, drainage, granular base and hot mix paving were completed from 20.0 miles west of Highway 576 westerly and Highway 144 from Highway 101 southerly including Tatachikanika River Bridge.

Northwestern Region — Cochrane, Sault Ste. Marie, Thunder Bay and Kenora Districts

The grading, drainage, hot mix paving and storm sewers were completed on Highways 11 and 583 on Sixth Street westerly for 1.9 miles, from 11.2 miles west of the west junction of 583 Hearst westerly 9.9 miles and Highway 583 from Highway 11 southerly for 0.4 miles.

On Highway 17, grading, drainage, granular base and hot mix paving from Highway 546, Iron Bridge westerly for 20.5 miles were completed. Grading, drainage and granular base were completed on Highway 546 from 0.4 miles north of Highway 17 at Iron Bridge southerly for 6.54 miles.

Grading, drainage, granular base and hot mix paving were completed on Highways 61 and 593, from Highway 130 southerly for 18.8 miles, from 0.5 miles south of Pine River Bridge to the Ontario/Minnesota boundary, from Highway 130 northerly to the junction of Highways 11 and 17, various locations and from Highway 61 westerly to Middle Falls Provincial Park 1.4 miles. On Highways 11 and 17, from 0.7 miles west of the east junction of Highways 11 and 17 easterly 0.9 miles including Nipigon River Bridge and intersection of Highways 11 and 17, the grading, drainage, granular base, hot mix paving and structures were completed.

On Highway 604 from Kenora east limits, easterly to Kenora Airport for 5.3 miles and Highway 128 and 659 various locations, the work of grading, drainage, granular base, hot mix paving was completed.

Eastern Region — Kingston, Ottawa and Bancroft Districts.

The improvements to the Wolfe Island Ferry service docks at Barrack Street in Kingston and Dawson Point on Wolfe Island were completed. The newly constructed Wolfe Islander III went into service in February. On Highway 14, Stirling north limits northerly for 7.3 miles, the grading, drainage, granular base, hot mix paving and Squire Creek Bridge were completed.

On Highway 417, 5.73 miles were completed from 0.6 miles west of Ottawa Queens-

way easterly to 2.8 miles east of Innes Road. This work consisted of grading, drainage, granular base, hot mix paving, fourteen structures, six special design culverts, lighting, signing and security fence. On highway 17N, the work of grading, drainage and structures, from 9.7 miles west of Arnprior westerly for 9.27 miles was completed.

On Highway 512, from 1.3 miles south of Highway 60, southerly for 8.0 miles, excluding a 1.6 mile section, the grading, drainage, granular base and Brudnell Creek structure were completed.

Quality Assurance Office

This office provides technical guidance and general supervision on quality assurance and provides extensive testing and evaluation on new construction procedures.

Some highlights of non-routine work carried out are:

- Extensive monitoring of three asphalt drum mixers working in the Province.
- Measured road roughness of 5,642 miles of pavement (Mays Meter).
- Continued monitoring of experimental skid resistant pavements on Highway 401 between Avenue Road and Jane Street.
- Developed, jointly with Engineering Research Branch, technology for successful installation of cathodic protection on a structure deck.
- Developed techniques for handling lime reactive clays which are saturated and would normally be wasted.

MAINTENANCE BRANCH

This branch directs and controls all summer and winter maintenance carried out by the districts on all the King's and Secondary Highways throughout the province.

Roads snowplowed during the winter months totalled 14,925 miles. Salt used for de-icing roads totalled 523,953 tons and sand

used for winter maintenance amounted to 1,069,051 tons.

Mulch pavement mixed and laid by Ministry forces totalled 38 miles.

Twenty-one zone stripers painted 14,227 miles of King's and Secondary Highways, plus painting 7,229 miles of edge line. During the past year one of Toronto district's stripers was converted to accommodate the application of fast-dry traffic paint. This new unit applies paint at a temperature of 160°F, and dries in seconds, thereby eliminating the need for protective cones. This speeds up the operation and increases production.

Landscape and Forestry Section — Some 86,551 trees and shrubs were planted in 17 districts. Herbicide applications for weed and brush control were carried out over 42,000 acres of right of way by all 18 districts. Soil erosion was controlled and roadside soil stabilized on new highway construction projects with approximately 4,400 acres being seeded and mulched by all districts. Dangerous and hazardous trees were removed by maintenance forces in the nine southern districts with approximately 9,044 trees being removed. The Landscape Planning Group was involved in 55 projects which included seven new route planning studies.

Electrical Section — This section was involved in the design of, and the district electrical crews in the installation of, traffic signals at 116 locations; highway illumination at 202 locations; flasher beacons at 68 locations; and sign lighting at 37 locations.

Electrical work in the wiring of buildings, field offices, patrol yards, and special lighting projects at 227 locations. Miscellaneous electrical work involving heating systems, pumps, furnaces, oil and gas fired, was carried out at 103 locations.

Structural Maintenance Section — During the year approximately 800 bridges were inspected. Recommendations were made for repair of these structures and field assistance was provided to perform the work. A new specially designed vehicle which facilitates the inspection and renovation of special structures was

put into service in 1975. This machine was very helpful at the Hogg's Hollow Bridge on Highway 401, the Bay of Quinte Skyway on Highway 49, the Garden City Skyway on the QEW and the Tansley Bridge on Highway 5. It is expected that this vehicle will prove very valuable in the future.

The Structural Maintenance Section has assisted all districts through a training course for the bridge foremen and in programming the repairs for 1976. This section also prepared plans for about 50 projects including bailey bridge detours and structure repairs. Most of these repairs were performed by district personnel and the remainder by contractors.

A continuous problem for all bridges has been caused by leaking at the deck joints. A special repair method to waterproof the joints was introduced to prevent the resulting deterioration.

Equipment Section — This section is responsible for establishing and controlling equipment policies, replacement of equipment, and staff training.

During the year 717 vehicles and 1,500 units of other equipment were acquired on a replacement basis at a cost of \$6,700,000. Participation also took place in the Hovercraft ferry project for the Moosonee to Moose Factory crossing in northern Ontario.

The Fleet Management Group coordinates and controls fleet maintenance through date processing and visits to the districts.

One hundred and fourteen training group courses were held for mechanics and equipment operators.

The Design and Machine Shop Group, designed and fabricated a variety of equipment, two of which were the Kingston to Wolfe Island Bubble System and the hot paint zone striper.

The Head Office Garage maintains and services a fleet of approximately 320 units of equipment supplemented by 60 rental trucks. One thousand, eight hundred units of equipment were processed and distributed to the districts.

Ferry Services — The ferries, Wolfe Islander and Upper Canada which are operated by the Ministry between Kingston and Wolfe Island made 9,169 return trips and carried 185,313 vehicles and 190,824 passengers during the fiscal year. The ferries, Quinte, Quinte Loyalist, and Glenora operating between Adolphustown and Glenora made 22,709 return trips and carried 249,194 vehicles. These vessels have no foot passenger accommodation.

The vessel Glenora, formerly the St. Joseph Islander, was modified, and replaced by the Quinte early in the year.

The new ferry Wolfe Islander III was delivered to Kingston at the end of 1975 and has been in regular service since the beginning of 1976. This new ship has accommodation for 50 cars, 330 passengers, and makes a round-trip every hour and twenty minutes.

It replaces the former Wolfe Islander and the Upper Canada. The Wolfe Islander is being retained as a relief vessel.

Sign and Building Permits Section

Building permits issued during the year by the Sign and Building Permits Section totalled 5,937, with a valuation of \$402,916,065; and permits for Field Advertising Signs totalled 6,427, with a valuation of \$74,113.

Other permits issued included 2,639 Entrance Permits; 1,074 Encroachment Permits; and 8,279 New Sign Permits and Re-issued Sign Permits.

MUNICIPAL TRANSPORTATION BRANCH

During the year, 826 municipalities and 48 Indian Reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition 53 municipalities received subsidies under the Public Transportation Program and 37 municipalities received subsidies under the Traffic Signal Program.

Subsidies paid to municipalities for roads and bridges, public transportation, rapid transit construction and traffic signal improvement programs were as listed below:

	ROAD MILEAGE	APPROVED EXPENDITURE	SUBSIDY PAID
Road and Bridge Section			
Metro Toronto	433.1	\$ 28,936,959.	\$ 14,468,480.
Regions	3,901.0	79,556,974.	43,726,867.
Counties	7,823.5	60,804,918.	40,523,878.
Townships	46,456.8	138,794,682.	77,340,481.
Urban Municipalities	19,987.5	196,976,668.	96,055,334.
	78,601.9	\$505,070,201.	\$272,115,040.
Public Transportation Section			
Rapid Transit	—	\$ 72,979,527.	\$ 54,665,645.
Capital Assistance	—	45,273,250.	33,678,069.
Operating Deficit	—	91,716,473.	45,299,673.
Demonstration Projects			
Capital			5,109,486.
Operating			859,664.
		\$209,969,250.	\$139,612,537.
Traffic Signal Section		\$ 3,053,242.	\$ 1,526,621.
County and Regional Roads			
	CONSTRUCTION	MAINTENANCE	TOTAL
Metro Roads	\$ 18,317,609.	\$ 10,619,350.	\$ 28,936,959.
Regions	53,940,072.	25,616,902.	79,556,974.
Counties	37,955,500.	22,849,418.	60,804,918.
Total	\$110,213,181.	\$ 59,085,670.	\$169,298,851.

Municipal Transit Office

The Municipal Transit Office is responsible for the administration of transit subsidy funds payable to municipalities and the provision of technical assistance to municipal transit authorities upon their request.

In 1975, \$45,299,673 subsidy was paid to municipalities to cover 50 percent of the transit operating deficit incurred.

In the same year \$33,678,069 subsidy was paid to municipalities to cover 75 percent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, bus passenger shelters, transit terminals and repair facilities.

Subsidy for the rapid transit construction program in 1975 amounted to \$54,665,645. This covered 75 percent of the cost of subway construction in Metropolitan Toronto and the major expenditures were for the Spadina Rapid Transit line and the purchase of new subway cars.

Demonstration projects administered by this office included the Dial-A-Bus experiment in Toronto and the Communications Information System — an electronic means of controlling bus operations in the Toronto Transit Commission buses and streetcars. The Sudbury Worker Bus Project terminated as a demonstration project in November when the city assumed the service as part of its regular

transit operations. The cost of these projects amounted to \$5,969,150.

The Municipal Construction staff continued to provide guidance, advice and assistance to personnel of districts, municipalities and consultants in connection with the planning, design and supervision during construction of a substantial number of municipal projects of varying complexity.

In 1975 the Municipal Transportation Branch administered a Connecting Link Program involving 143 projects and an expenditure of \$11,041,000. This expenditure represents 75 percent, 100 percent or 90 percent of the shareable cost depending on whether the project involved is a city, town or village.

The Development Roads program consisted of 84 projects and an expenditure of \$8,006,100. Usually this expenditure represents 100 percent of the cost of reconstruction. The road remains under the jurisdiction of the municipality and the work is carried out either on a day labour basis or by means of contract.

During 1975 the Ministry expended \$2,300,275 in providing aid to 201 Local Roads Boards, 30 Statute Labour Boards, 22 Indian Reserves and 77 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the province.

A further sum of \$1,829,659 was expended without local participation on the replacement of bridges and on grade improvements involving 101 projects on these roads.

DESIGN DIVISION

The Design Division is responsible for policy and procedures covering the design and traffic operations of the Ministry's transportation projects. It consists of two branches: Systems Design and Engineering Services; and the Traffic Control Office.

SYSTEMS DESIGN BRANCH

This branch ensures that design policy, methodology and standards are feasible and

progressive for regions to execute design programs in an efficient and economical manner. It also monitors the application and benefits of such policies and standards and provides specialized design components only in those disciplines where sufficient workload, technical development or staff capabilities are not available to regions.

An internal organizational study resulted in the branch being restructured to consist of the Analysis Office and the Policy and Procedures Office.

Policy and Procedures Office

Within this office, the Geometric Standards Section is responsible for providing the regions with geometric design standards, policies and tools. The Physical Standards Section is responsible for the setting and implementation of minimum and cost effective standards for design, construction and manufactured products. The Drainage Section ensures that drainage policies, methodologies and standards are feasible and progressive.

The Environmental and Metric Standards Section is responsible for the development of design standards, aids, guidelines and techniques related to the design of safe, efficient, economical transportation systems and the fulfillment of environmental requirements, and to develop metric highway engineering standards and criteria.

Analysis Office

Within this office, the Design Analysis Section is responsible for monitoring the regional planning and design process and for providing Head Office Systems Design input into the development of regional project design concepts. The Contract Review Section reviewed 135 projects for accuracy and conformity to current policy.

The Electrical Design Section recommends policies and establishes procedures for design, specifications and contractual methods for illumination, traffic signals and other electrical work. This section was involved in 273 projects during the year.

ENGINEERING SERVICES BRANCH

An organizational change was initiated during the year with the amalgamation of the

Land Surveys Office, Right-of-Way and Services Division and the Engineering Plans Office, Design Division, to form the Surveys and Plans Office.

The function of the branch is to establish design and survey policies and procedures, to monitor their application and benefits and to provide a variety of testing services.

Geotechnical Office

The Geotechnical Office produced 107 strip maps for contract tendering purposes, reviewed 47 official plans re aggregate resource policies, monitored 126 soils design reports and profiles, processed 13 pavement selection reports, and initiated a trial project on the construction of an open-graded base.

One hundred foundation investigations for bridge designs were carried out, the inclusion of foundation construction reports in Contract Documents was initiated, and the tendering system for the hiring of drilling contractors was revised. The Hydrology Section completed 28 preliminary and final reports, 37 municipal investigations and 91 municipal reviews. The report on the Design Flood Estimation was also completed as well as an acceptable Design Flood Policy.

Several specific projects were undertaken, including the development of a time-sharing retrieval for the Pavement Management System, the monitoring of the settlement of several structures and embankments in the sensitive marine clays and the settlement of a highway embankment due to self-weight. Two projects dealing with lime stabilization of varved clays in northern Ontario, and the suitability of shales in highway construction were also begun.

Laboratory Services Office

The Laboratory Services Office continued their routine testing and inspection service related to asphalt, concrete, soils, aggregates, metals and chemical products. Over 600 materials and products are subject to this process.

Evaluation work is continuing on the possibility of extending the life of licence plates to ten years, on validation stickers for snow vehicles, on blue flashing dome lights

used by emergency vehicles, and on the development of a rapid analysis machine to quickly determine the cement content of fresh concrete at the job site.

This year, for the first time, a laboratory accreditation program by an independent agency, the AMRL (AASHTO Materials Reference Library) has been initiated.

Structural Office

The Structural Office completed the design and contract documents for 55 highway bridges, 97 sign support structures and 28 special design culverts, and provided supervision for 12 highway bridges designed by consultants. A new type of bridge was developed in conjunction with industry and built at the Slate River crossing of Highway 608 near Thunder Bay. Designated as a "mini box girder", the bridge has the advantage of a construction time of only half that of conventional types.

The Municipal Section approved plans for 142 preliminary structures, 191 final bridges, 147 culverts and 68 miscellaneous items. Inspection was carried out on over 400 existing municipal structures and 175 load restriction by-laws were reviewed. With the increasing concern about the conditions of municipal structures, a Municipal Bridge Program was defined to assist municipalities in improving their inventories and the rating of load capacity of their structures. A computerized bridge inventory method is being developed which will be capable of providing an improved inventory of all provincial bridges and their structural condition.

Work has started on the writing of an Ontario Highway Bridge Design Code for use throughout the province. The target date for completion is January 1978, and the 17 committees are staffed by 35 Ministry engineers and 31 engineers from university, industry and consulting firms.

Surveys and Plans Office

This office comprises the Engineering Plans and Land Surveys functions at head office.

Policies and procedures for engineering surveys and legal surveys, plan preparation and registration, cartography, photogrammetry and remote sensing are developed.

During the year, 1,440 plans were examined by the office prior to their registration in the appropriate Land Registry Office by the five regional offices. In addition, 202.39 miles of highway were designated as controlled-access highways, bringing the total mileage of such highways to 3,435.64 miles.

The 1975 Official Road Map was re-printed rather than issuing a new 1976 map, in anticipation of a new Metric 1977 version. Twelve county and township maps were prepared as well as the first edition of the Provincial Airport Facilities Map. Work progressed on the South Central Ontario Transit Map on behalf of the Toronto Area Transit Operating Authority.

Photogrammetry Section produced 164 plans at various scales including 11,300 acres of large scale coverage and 330,500 acres of medium and small scale coverage. Also 114 miles of profiles and cross sections were prepared and 30 oblique photographic projects were flown.

The Remote Sensing Section investigated 3,115 square miles of terrain for planning, design, geotechnical and legal purposes. Sixteen environmental parameters for a 46 square mile test site along Highway 402 were studied under spring, summer and fall conditions as part of the project entitled "The Surveillance and Prediction by Remote Sensing of the Environmental Effect of a New Highway Facility". The section also provided aerial photographic mosaics and image library services to the Ministry.

Surveys Section evaluated an additional 1,800 horizontal control survey monuments for a total of 20,500 now evaluated on the Ontario Co-ordinate System and also established 625 precise bench marks. This is a combined total from the former Engineering Plans Office and the Land Surveys Office.

The extensive training program was continued and in surveying and drafting 164 candidates tried qualifying examinations and 122 passed.

Traffic Control Office

The Traffic Control Office is responsible for setting policy and procedures applicable to traffic control devices and also provides a variety of services to other branches and offices, such as data collection, subsidy approvals, sign designs and improved systems design operational warrants.

The Traffic Analysis Section completed three urban traffic operational studies. Two additional studies were brought to the draft report stage, and four new studies were initiated.

Over 85,000 roadside interviews were conducted in a number of locations across the province.

In Traffic Control Development, six projects were completed in pursuit of the goal of developing new devices and techniques for operational improvements of highways. There are 35 additional projects underway or being considered.

Installation and start-up of the Freeway Surveillance and Control System for a portion of the Queen Elizabeth Way through the City of Mississauga was completed. Television cameras, vehicle detectors in the roadway and traffic signals on interchange ramps are being used to control and improve the flow of traffic on this section of the QEW. Considerable improvement in traffic flow has already

been noted. Material has been ordered for a centralized control system which will coordinate the operation of the various components and permit a more rapid detection of accidents or unusual conditions on the freeway.

A Traffic Information Systems Development Section was inaugurated in February, 1976, to develop an Accident Information and Retrieval System based on user's needs. This section, in conjunction with the Engineering and Management Systems Branch, is modifying the existing system which will provide an interim measure toward this end.

In the devices area, the need for illumination in 47 projects was reviewed by the Traffic Devices Section. New traffic signal installations, or revisions to the existing signal installations were approved at 80 locations on the King's Highway system, and 623 locations on municipal roads. Staff continued participating in computer based traffic signal studies in three cities.

The Traffic Control Manual for highway work operations was completed and consolidates two previous manuals on this subject. All districts were instructed to use the newly adopted symbol signing for the 1976/77 construction season.

Other new symbol signs introduced were "Yield", "No Stopping", "Moose Crossing" and advance "Railway Crossing" signs.

DRIVERS AND VEHICLES

TRANSPORTATION AND REGULATION DIVISION

The Transportation and Regulation Division, formerly Licensing and Control Division, was formed in January, 1976. It is comprised of the Licensing and Control Branch and the Program Development Branch.

Driver Licensing and Control Office

The licensing and post-licensing of drivers comes under the jurisdiction of this office. The day to day functions also include the maintenance and administration of the Demerit Point System; the maintenance of all drivers records; administration of license suspensions; the re-instatement of driving privileges; and the review of all drivers known to have medical or physical conditions.

	1975	
Licensed Drivers		4,160,623
New Drivers	266,880	
Male	2,530,613	
Female	1,630,010	
Demerit Point System		
Warning at 6 to 8 point level	103,747	
Interview at 9 to 14 point level	30,112	
Suspensions at 15 or more point level	7,043	
Suspensions for 30 days	6,017	
Suspensions for 6 months	1,026	
Suspensions for physical or medical reasons	1,147	
Suspensions for drinking and driving	51,686	

Vehicle Licensing and Control Office

A major responsibility of this office is the licensing of the Province's 4,295,828 vehicles and the provision of relevant licensing information for the purpose of law enforcement.

Seven Ministry offices and 299 appointed licence issuing agents provide licensing service to the public throughout Ontario.

An automated system handles the 3.4 million passenger and half-million trailer registrations. Other records are maintained manually for commercial motor vehicles, buses, motorcycles, mopeds, motorized snow vehicles.

The licensing of public commercial vehicles and public vehicle operations is also administered by this office.

PROGRAM DEVELOPMENT BRANCH

The Program Development Branch has responsibility for providing the primary staff resource to the Drivers and Vehicles area of the Ministry in the assessment of transportation regulation programs and in the development of new policies and programs for that area.

The branch is composed of four offices: a Project Planning Office; a Program Support Office; a Vehicle Standards Office; and a Drivers Standards Office.

REGIONAL OPERATIONS DIVISION

This division is divided into 13 districts contained within five regions: Northwestern Region (Thunder Bay); Southwestern Region (London); Northern Region (North Bay); Eastern Region (Kingston); and Central Region (Toronto).

The responsibility for field operations throughout the province in the areas of driver examination, vehicle inspection and enforcement of the Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act and Motor Vehicle Transport Act (Canada), including investigating and prosecuting illegal trucking operations in the province, is administered by this division.

Driver Examination

A total of 613,659 inside pre-examinations were conducted at 165 driver testing facilities throughout the province and 397,920 road tests were conducted by a staff of 229 examiners.

Fifty high school driver instruction teachers were employed as driver examiners during the summer tests. Also, during 1975, Ontario recruited additional female examiners bringing the total to seven from the previous five hired in 1974.

Vehicle Inspection

A staff of 98 vehicle inspectors administer four programs designed to reduce death, injury and property damage caused by defective vehicles.

The 13,478 inspection mechanics registered under the licences of 7,419 appointed inspection stations are permitted to complete safety standards certificates. A total of 826,412 certificates were filed in 1975.

The inspection of safety-related vehicle components or systems on heavy commercial motor vehicles is carried out at roadside inspection sites across Ontario. MTC truck inspection stations are most frequently used. A total of 50,116 inspections were carried out in 1975 and 8,018 vehicles were detained until hazardous defects were corrected.

During the year, 35,571 vehicles were inspected at the vehicle inspection lanes at Downsview and 38,134 vehicles were inspected by portable inspection lanes travelling throughout the province during the summer months. The inspection lanes identified 5,835 vehicles having defects so serious in nature as to make further operation impossible until repairs were made.

In the semi-annual inspection of school buses some 20,000 inspections were made across the province.

Highway Carrier

The regulation of for-hire trucks and buses and the enforcement of the provincial weight laws are the responsibility of the 179 Highway Carrier Officers. A total of 48 truck inspection stations are operated throughout the province which in turn are further supplemented by mobile patrols in designated areas, and as a result some 3,103,984 vehicle inspections were carried out.

Driver Improvement Counselling

A staff of 16 counsellors conducted 29,050 interviews with Ontario drivers reaching the nine point level under the Demerit Point System.

Vehicle Registration

Ministry licence issuing offices provided registration service for motor vehicles, trailers and motorized snow vehicles at seven locations throughout Ontario — Ottawa, Hamilton, Mississauga, Stratford, Oshawa, Chatham and Toronto.

Investigations and Prosecutions Office

This office was established to co-ordinate and ensure uniform enforcement activities under the Public Commercial Vehicles Act, the Public Vehicles Act and the Motor Vehicle Transport Act (Canada).

In-depth investigations have been conducted into the negotiations and transactions of unlicensed carriers and users of the service operating under the guise of a lease. There are currently 2,000 matters before the courts — approximately one-third involve alleged leasing operations.

Staff Safety Office

This office is responsible for devising policies, programs and safe practices designed to protect the 11,000 employees of the Ministry from work-related accidents and injuries, and accidents involving Ministry motorized equipment.

One of the most significant programs introduced in 1975 was the eight hour Defensive Driving Course. Up to the end of the year, nearly 1,400 Ministry equipment

operators had completed the course. Eventually, it will be made available to employees who drive their own vehicles on Ministry business, and subsequently to all MTC employees.

Subsequent to convictions being registered establishing a pattern of illegal operations, the Registrar of Motor Vehicles has cancelled the commercial vehicle permits of some 19 unlicensed carriers and 15 prohibitions were issued against unlicensed non-resident operators.

ADMINISTRATION

EXTERNAL RELATIONS DIVISION

Division Support and Claims

This office receives and processes the many claims, both insured and uninsured, with which the Ministry becomes involved every year. In addition the office provides administrative and clerical support to the Office of Legal Services.

Office of Legal Services

The Office of Legal Services is a law office within the Ministry which provides legal services to the Minister and Ministry staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to the Ministry. They are located at Downsview, Queen's Park with Drivers and Vehicles, and at each of the Regions.

The office provides legal advice on all aspects of the Ministry's programs and prepares the legal documentation through which such programs are carried out. The office advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes which the Ministry administers.

Legal office counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact and conducts prosecutions for offences under the Ministry's statutes.

SERVICES DIVISION

ENGINEERING AND MANAGEMENT SYSTEMS BRANCH

The main responsibility of the branch is to provide the Ministry program managers with expertise in mechanized and non-mechanized systems, management science and the acquisition, development and maintenance of automatic data processing services.

There are currently over 100 computerized systems supporting various programs of the Ministry. All aspects of systems development and maintenance activities are performed by the Co-ordinators' offices of the branch as follows:

Systems Co-ordinators' Offices — Engineering and Research and Planning and Design

These offices are responsible for the design, development and maintenance of systems for various applications including the spectrum of engineering and scientific activities.

Systems Co-ordinators' — Driver and Vehicles

During the past year the automated vehicle system has been fully developed and was operational in July 1975. This system has on-line enquiry capabilities with respect to vehicles, ownership, history. This system is

integrated with the on-line drivers system and now provides law enforcement enquiries and up to date driver and vehicle renewal status.

Systems Co-Ordinators' Office — Finance and Administration

This group undertook an in-depth study of the systems and procedures of the Ministry's 18 engineering districts. Development of a number of new systems is expected to result, in the coming year, in significant improvements in the ability of district financial and operational management to respond to changing needs and conditions.

Production Services Office

This office is responsible for the provision of comprehensive support to all users of the Ministry with respect to data conversion, technical control, documentation and administrative support, computer services monitoring and graph plotting services for engineering applications. An IBM 370/168 computer system was installed to provide service to this Ministry by the Ministry of Government Services. Improved turnaround time including on-line enquiry has resulted.

Management Science Office

The responsibility of this office is to assist Ministry senior management to identify and implement organizational, operational and process improvements.

During the past year this office participated or was involved in such projects as: a Ministry-wide management improvement review and beginning of the subsequent implementation; a review of service centre facilities and their utilization; a study of driver examination services; assistance in the implementation of performance budgeting; and a review of policy development and planning.

SUPPLY AND SERVICES BRANCH

This branch was created during the year as a result of the Ministry reorganization and complement constraints by combining the Supply and the Services Branches.

The branch is responsible for a wide range of functions performed through the following offices.

Purchasing and Supply Office

The Purchasing Section is responsible for the purchase of all motor vehicles for the Ontario Government, as well as construction and maintenance materials and general supplies, for the Ministry. Annual purchases total about \$50 million.

The disposal of all used equipment and surplus material for the Ministry as well as all motor vehicles for the Ontario Government is done through the Material Control Section. Disposal is by means of public auction or tender and sales total about \$2,900,000 a year.

Through the Stores Section the Ministry takes advantage of savings by bulk purchasing and facilitates the operational part of the Ministry by having materials available when required. They also recondition and store Bailey bridge components for emergency use throughout the province. There are currently 220 such installations in the province for the Ministry, municipalities or other agencies.

Supply Services Office

The Supply Services Office is responsible for the maintenance of government-owned sedans operated by Cabinet Members and senior management in Queen's Park as well as providing a limousine and chauffeur pool service.

All Ministry-owned survey equipment, traffic counters and allied equipment are repaired at the Orfus Road Instrument Repair Shop.

The Accounting and Asset Control Section is responsible for the requisitioning of special equipment for the Ministry such as: micro-wave measuring units; tellurometers; geodimeters; transits; levels; and traffic recorders. The main purpose of this section is however, the monitoring and administrative control of the Movable Asset Inventory Control Program for the Ministry.

Tenders Office

This office promotes and maintains strict security over all tendering procedures, tenders

in custody and all highly confidential matters related to engineering and supply contracts.

Approximately 12,000 tenders were received and processed for 2,100 various contracts. Public attendance by contractors and suppliers numbered 2,300 at the tender openings.

In the advertising function, this office placed approximately 3,000 insertions on behalf of the Ministry on a province-wide basis. These advertisements were to call tenders on engineering and supply contracts, property sales, equipment sales and a variety of other notices.

The direct cash sales of Contract Documents, the Standard Specification Manual and the Ministry's "Contract Bulletin" to the contracting industry, has produced an annual revenue of approximately \$33,000.

Special Services Office

The Special Services Office administers a capital building program involving provision of the Ministry's total major building and space requirements, including, office furnishings and equipment in the head office, regional and district headquarter complexes.

- Maintains constant liaison with the Ministry of Government Services relative to all buildings and accommodation matters, including property selection and purchase; site development; and construction of office and lab or repair shop facilities.
- Designs and prepares architectural drawings and tender documents for construction of the Ministry's patrol garages, storage domes and vehicle inspection station requirements.
- Designs and prepares office accommodation layout and office communication and electrical requirement drawings, including specifications for Ministry operations.

The Project Management Unit has been involved in the development and completion of six major capital construction projects during this year. An additional two major projects are currently under construction and four more will commence next fiscal year.

This office is also responsible for all communication facilities within the Ministry (radio, teletype, intercom, telephone and postal services) and for the administration of service centres on controlled-access highways.

Major telecommunications projects completed, include:

- The multi-channel VHF/FM radio systems, Toronto and Stratford Districts.
- The change-over of the teletype system from a normal "private wire" concept to an automated computer-based system, operating at 100 words per minute.
- The design and supervision of installation of an UHF/FM radio system for TATO A relative to the GO-Bus operation on the Toronto-Hamilton route, involving 16 radio equipped buses, two base station control terminals, and an automatic unattended repeater station.
- Radio field propagation tests and radio specification preparation relative to the procurement of two multi-channel radio systems for the Huntsville and Bancroft Districts, scheduled for completion in 1976; and
- The design and installation of a public address system for the GO-Train operations between Oakville — Toronto — Pickering and Toronto — Georgetown routes. This system provides platform paging on a broadcasting basis from Union Station, Toronto, local platform paging by the station masters, and paging between stations.

Twenty-three service centres were in operation at the end of the past year, 19 on Highway 401 and four on Highway 400. Twenty-one picnic area sites located adjacent to service centres were available for the use of the motoring public.

Record Services Office

This office administers a program of records management providing assistance to all Ministry organizations in the efficient handling of records and information. Under this program, Forms Management and Microfilm

Services are centralized services used to improve the Ministry's record-keeping practices.

The office also provides library service which is recognized as an authoritative source of information in the Ministry's fields of interest and responsibility. Publication services, including the printing, distribution and sale of Ministry maps and publications is a further responsibility of this office. Revenue from the sale of county maps is in excess of \$36,000 annually.

Graphic Services Office

The principal functions of the Graphic Services Office are to provide printing and duplicating services; a wide variety of high quality black and white and color reproduction services using photographic, Diazo, screen processing and Xerox methods; and a commercial art and display service for the various Ministry programs.

The office processed approximately 35,000 requests for various services during the year and the display unit participated in ten exhibitions at various locations.

THE PUBLIC AND SAFETY INFORMATION BRANCH

This branch disseminates all aspects of information related to Ministry operations through the use of news releases, speeches, statements, media conferences, displays and films.

Transportation safety education and information programs are created, promoted and organized for all age groups. These programs range from Nursery School and Kindergarten groups to Senior Citizens. They are aimed at promoting public safety awareness.

The necessary expertise required for layout, marketing and advertising is also provided to produce brochures, pamphlets, booklets and bulletins.

In addition, this branch is responsible for producing in-house television and radio spots, films and slide shows, and audio-visual services; planning and coordinating exhibits and displays; planning and operating the "Safety Caravan" at Fall Fairs, Winter Carnivals and other public gatherings; arranging and

organizing official functions and opening ceremonies, producing several periodical publications, including the MTC News, The Ontario Traffic Safety Bulletin and the Annual Report; and providing the Ministry's road reporting service to the motoring public.

PROPERTY BRANCH

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveying functions, are developed by this office.

Using these policies and procedures, staff in five regional offices negotiated 1,561 amicable property settlements. The Ministry expropriated 295 properties to obtain title for land required to permit contracts to proceed.

The Ministry expended \$17,452,542 in payment of compensation in acquiring title to lands required for highway projects. An additional \$2,071,133 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$3,654,185 from the sale of surplus lands and \$736,385 from leasing properties was received by the Ministry.

The extensive training program was continued and affected 42 staff who attended courses and examinations in real estate matters and all were successful.

INTERNAL AUDIT BRANCH

This branch is responsible for the audit activities of the Ministry. To accommodate this function, the branch is segregated into three areas of responsibility.

Operation Audit Office

This group is engaged in the expenditure, revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units.

The staff also performs audits in municipalities dealing with Ministry subsidized road and transit expenditures. This function

also extends to such agencies as the Ontario Northland Transportation Commission and the Toronto Area Transit Operating Authority, as well as specific programs concerning expressways and connecting links.

Engineering Audit Office

The Engineering Audit Office, with complement in five regional offices and head office, audit all phases of the Ministry's capital construction program and Ministry subsidized contracts.

In 1975-76 some 600 interim and 2,000 weigh audits were performed to ensure proper progress payments on contracts. Design audits, claims investigations, confirmation of final contract pay quantities on all contracts and force accounts rounded out this office's activities.

Project and Electronic Data Processing Audit Office

This office was newly created within this fiscal year. It was established as a specialized Audit Section to deal with complex and contentious problems, normally outside the scope of planned audits in the other two areas, such as audit of contractors' accounting and other relevant records towards the substantiation of claim costs, special investigations and the new EDP audit area.

The general objectives of the EDP audit function are:

- to evaluate the effectiveness and efficiency of Ministry electronic data processing systems;
- to examine feasibility studies, project proposals, environmental security of Ministry files processed at both internal and external data centres and adherence of systems to administrative policies; and
- to make recommendations for general improvements and follow-up implementation of same.

Achievements of this office in the fiscal year were limited to the initial stages in the development of its objectives.

FINANCIAL BRANCH

The Financial Branch fulfills the normal functions of recording, monitoring and controlling both expenditures and revenues of the Ministry. It provides advisory assistance to management on financial matters and acts as the liaison between the Ministry and the Central Agencies, other arms of government, and the public in the area of finance and accounting.

The branch is also responsible for the prequalification of contractors who wish to bid on Ministry contracts and contracts for several of the larger urban municipalities.

It maintains a substantial statistical recording unit for the provision of statistical information concerning most subjects affecting the Ministry in quantities, dollar volume units and prices, indices, and geographic locations and it provides the Head Office accounting for all the branches of the Ministry which are located at Downsview.

Program Analysis Office

The functions of the Program Analysis Office started in 1969 and have been expanded to embrace the recommendations of the Committee on Government Productivity Reports.

This office is responsible for determining the Ministry's financial profile over a three-year term and develops the annual budget for the Ministry in light of the new policy directions given from Central Agencies and the requirements of ongoing programs.

The Ministry's output from its current programs, in terms of goods and services, is measured with respect to the effectiveness of resource allocation. With the advent of the "Management by Results" program, initiated by Management Board in 1974, the Program Analysis Office is required to prepare agreements for performance review. These agreements concern themselves with the objectives, costs and time schedules of projects undertaken by the Ministry. The major part of this office's activities involves close liaison with Management Board of Cabinet, the Cabinet Committee of Resources Development and other Ministries in the Resources Policy field.

SPECIAL REPORTS

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

The Ontario Northland Transportation Commission provides an efficient, diversified and economical means of transportation and communication best suited to the individual requirements of their customers and communities.

Telecommunication Services

Telecommunication Services continued to be the strong factor in the profit-making areas, with a profit in excess of \$3,600,000, which was about 10 percent over the forecasted plan for last year, and just marginally higher than it was in 1974.

Increased revenues were largely due to a 12 percent increase in long distance calls, and a 16 percent increase in sales of service in the private line area, such as individual voice and teletype circuitry.

Diverse activities during the year included the completion of construction of a diesel power generating plant at Fort Severn, on the shore of Hudson Bay; the building of 90 miles of high-voltage electrical power line from Moosonee to Otter Rapids, where it was connected to the Ontario Hydro provincial power grid; the installation of a new dial exchange in Ontario's oldest community, Moose Factory; microwave extensions and other circuitry expansions. Direct distance dialing commenced in the Timmins area in 1975,

and will be extended to the Cochrane and Kapuskasing area by the end of this year or early in 1977.

The Telecommunications Branch is extending both power and communication facilities to the Far North on a subsidized basis on behalf of the provincial government.

norOntair Services

norOntair ridership grew to 62,808 passengers in 1975, from 27,401 in 1974. The increase was largely due to the provincial government's policy to extend norOntair into northwestern Ontario to serve the communities of Chapleau, Wawa, Thunder Bay, Pickle Lake, Atikokan, Fort Frances, Kenora and Dryden.

norOntair now provides daily airline service to 16 communities from Kenora in the northwest to North Bay in the southeast. It is worth noting that norOntair completed over 97 percent of its flights in 1975, which is quite comparable to the standards of mainline air carriers. It is expected that norOntair's growth will continue in 1976, and it is estimated that upwards of 85,000 persons will use the service.

Marine Services

The Ferry Chi-Cheemaun, operated by the Owen Sound Transportation Company and administered by the Ontario Northland Transportation Commission, completed its first full year of operation between Tobermory

and South Baymouth in 1975 and recorded a modest operating profit in excess of \$200,000.

Figures for 1975 show 224,937 passengers; 6,763 trailers; 60,231 cars; 4,205 trucks; 224 buses; 1,627 motorcycles and 524 bicycles, representing an increase of about 100 percent over 1974.

Rail Services

Several improvements were introduced on the Polar Bear excursion train last year, and should be effective in maintaining this as one of the most popular tourist attractions in the region.

THE ONTARIO TELEPHONE SERVICES COMMISSION

The Ontario Telephone Service Commission is responsible for regulating independent telephone companies operating in Ontario pursuant to The Telephone Act, R.S.O. 1970, Chapter 457.

As of January 1, 1976, there were 40 independent systems operating in Ontario with approximately 245,000 telephones and an estimated gross capital investment expenditure for plant and equipment of over \$118 million.

During 1975 a booklet entitled, "A History of the Independent Telephone Industry in Ontario" was published to observe the 100th anniversary of the invention of the telephone by Alexander Graham Bell.

ONTARIO HIGHWAY TRANSPORT BOARD

This is the twentieth annual report of the Highway Transport Board.

Meetings have continued to be held in various parts of the province where it is most convenient and economical for the parties involved.

Applicants received by the Board totalled 2,969, of which 1,451 were related to The

Public Commercial Vehicles Act; 835 to The Public Vehicles Act; and 683 to The Motor Vehicle Transport Act (Canada).

Following is the statement of revenue of the Ontario Highway Transport Board:

REVENUE 1975	
Application fees	\$108,270.00
Hearing Cost	38,688.37
Tariff of Tolls	91,658.00
Fees for certificates, etc.	3,525.00
Gross Revenue	\$242,141.37
Less refunds on applications and tariff of tolls	2,985.00
Net Revenue	\$239,156.37

TORONTO AREA TRANSIT OPERATING AUTHORITY

On April 1, 1975 the Authority acquired the assets of the Province's Government of Ontario Transit and commenced operating the services in the Lakeshore and northern corridors.

During the year the Authority accepted several major assignments for the development of new bus and train transit services and was principally involved in the Toronto Transportation Terminal project. Intensive work was continued on the design and procurement of bi-level rail coaches. And GO Transit operations can best be described as continuous adjustment and expansion of capacity to meet steadily mounting demand.

Except for uncontrollable delays on the Richmond Hill rail service, the development of new transit service corridors proceeded pretty well according to schedule.

GO Transit inter-regional bus services were designed and inaugurated for routes to the west, northwest, and northeast of Metropolitan Toronto. Work continued on the final design of the Richmond Hill train service and Authority engineers were involved with transit planners of MTC and Peel Region in completing a feasibility study of commuter rail in the Streetsville/Milton corridor.

In May 1975, the Chairman was named by Premier Davis to chair a group of railway and governmental officials charged with the implementation of approved plans for modification of rail and station facilities in the Toronto Transportation Terminal. This project has been viewed as the key to orderly development of commuter rail services for the area and the implementation group gave it urgent priority. By year end, detailed plans and estimates were ready for presentation to the Premier's inter-governmental committee.

At the municipal level, 1975 also saw considerable expansion of transit operations. Several municipal systems now regularly serve

GO rail stations and the proportion of GO patrons who access by local transit is showing an encouraging increase.

During 1975, GO Transit carried 12,052,677 passengers as compared with 10,615,663 for 1974.

The new northwest rail service to Georgetown which has been in operation since April 1974, showed an increase of 50% in its second year.

The outlook is for a continuation of demand expansion and, in spite of financial constraints, we hope to cope with that demand, at least in the short term.

MINISTRY EXPENDITURE BY HIGHWAY

APRIL 1, 1975 to MARCH 31, 1976

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster — Windsor	\$ 2,797,363	\$ 2,703,088
2A	Hwy. 401 (MCF) — Hwy. 2 (Toronto)	83,868	—
3	Fort Erie — Windsor	2,538,647	1,842,873
4	Port Stanley — Flesherton	77,094	1,025,321
5	Toronto — Paris	70,345	492,324
6	Hwy. 24 — Tobermory	4,147,223	1,544,903
7	Ottawa — Sarnia	9,726,558	3,192,746
7A	Hwy. 115 — Hwy. 12 (Manchester)	3,186	172,025
7B	Peterborough — Chemong Corners	—	45,716
8	Winona — Goderich	1,102,797	553,312
9	Hwy. 11 — Kincardine	591,553	744,429
10	Port Credit — Owen Sound	1,561,276	740,948
11	Toronto — Rainy River	29,627,088	5,659,962
11B	At New Liskeard	69,665	52,364
12	Whitby — Midland (7)	2,130,579	555,396
14	Bloomfield — Marmora	1,291,004	214,361
15	Kingston — Ottawa	131,175	381,643
16	Johnstown — Ottawa	24,518	298,795
17	Quebec Boundary — Manitoba Boundary	14,724,526	6,236,192
17B	At North Bay	—	3,130
18	Leamington — Windsor	128,981	182,316
18A	Kingsville — Hwy. 18	775,942	86,312
19	Port Burwell — Tralee	17,004	455,255
20	Niagara Falls — Hamilton	1,227,033	365,503
21	Hwy. 3 (Morpeth) — Owen Sound	422,621	1,048,566
22	London — Hwy. 7	353,392	168,317
23	Hwy. 7 — Hwy. 9 (Teviotdale)	15,366	368,757
24	Hwy. 59 — Collingwood	2,278,189	754,927
24A	Paris — Galt	200	55,327
25	Oakville — Hwy. 89	588,522	400,403
26	Barrie — Owen Sound	1,988,410	415,997
27	Toronto — Penetanguishene	1,279,002	617,961
28	Port Hope — Bancroft	1,381,426	413,730
29	Brockville — Arnprior (15)	2,203,179	319,547
30	Brighton — Havelock	5,557	149,959
31	Morrisburg — Ottawa	190,532	309,202
32	Gananoque — Hwy. 15	30	53,227
33	Kingston — Stirling	38,775	398,747
34	Hwy. 2 (Lancaster) — Hawkesbury	82,874	230,749
35	Hwy. 401 (Newcastle) — Dwight	584,661	551,619
35A	Fenelon Falls — Hwy. 35	—	10,247
36	Burleigh Falls — Lindsay	462,549	200,867
37	Belleville — Hwy. 7 (Actinolite)	656,004	127,788
38	Kingston — Hwy. 7 (N. of Sharbot Lake)	130,974	228,744

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
40	Blenheim — Sarnia	\$ 6,244,988	\$ 392,397
41	Napanee — Pembroke	1,019,991	628,672
42	Brockville — Westport (29)	391,272	154,823
43	Alexandria — Perth	1,870,904	509,517
44	Hwy. 17 — Hwy. 29 (Almonte)	—	54,755
45	Cobourg — Norwood	19,988	167,377
46	Hwy. 7 (E. of Manilla) — Coboconk	14,702	79,703
47	Hwy. 48 (N. of Hwy. 7) — E. of Hwys. 7 & 12	3,221	190,343
48	Toronto — Hwy. 46 (Bolsover)	5,632,817	394,046
48B	Jct. 12 & 48 to Jct. 48	3,176	34,469
49	Picton — Hwy. 2 (W. of Deseronto)	2,570	77,565
50	Toronto — Hwy. 9 (N. of Palgrave)	10,544	189,744
51	Rondeau Provincial Park — Jct. Hwy. 3	—	16,647
52	N. of Hwy. 97S — Hwy. 2	1,801,582	118,325
53	Hamilton — Hwy. 2 (Eastwood)	193,106	249,267
54	Cayuga — Cainsville	464,877	218,033
55	Jct. Hwy. 8 — Niagara	47,923	63,106
56	Jct. Hwy. 3 — Jct. Hwys. 53 & 20	2,145,878	124,256
58	Port Colborne — St. Catharines	180,424	193,946
59	Long Point — Hwy. 3 (E. of Tillsonburg)	18,838	418,932
60	Hwy. 17 (W. of Renfrew) — Huntsville	1,606,328	742,318
61	International Border — Thunder Bay	1,725,333	125,199
62	Hwy. 14 (N. of Belleville) — Pembroke	1,272,383	691,926
63	North Bay — Quebec Boundary	—	182,892
64	Sturgeon Falls — Hwy. 11	2,287,039	385,373
65	Quebec Boundary — Matachewan	1,134,506	302,126
66	Quebec Boundary — Hwy. 65	11,206	259,864
67	Iroquois Falls — Hwy. 101	5,503	65,801
68	Hwy. 17 (Espanola) — South Baymouth	1,588,978	446,900
69	Hwy. 12 (N. of Brechin) — Capreol	1,497,693	1,151,378
70	Springmount — Hepworth	2,542	55,497
71	Fort Frances — Hwy. 17 (E. of Kenora)	1,742,591	289,718
72	Hwy. 17 (Dinorwic) — Sioux Lookout	47,911	121,957
73	Port Bruce — Dorchester	2,087	152,065
74	Hwy. 3 (New Sarum) — Nilestown	—	84,975
76	Hwy. 3 (Eagle) — Hwy. 2	—	72,513
77	Leamington — Hwy. 401 (N. of Comber)	—	60,798
78	Hwy. 21 (Dresden) — Wallaceburg	—	44,315
79	Hwy. 2 (Bothwell) — Hwy. 7	—	142,838
80	Hwy. 2 (S. of Glencoe) — Courtright	4,689	291,899
81	Delaware — Grand Bend	14,666	248,361
82	Hwy. 7 (Thedford) — Hwy. 21	12,991	33,087
83	Hwy. 23 (Russeldale) — Hwy. 21	917,044	163,705
84	Hensall — St. Joseph	12,360	65,444

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
85	Kitchener — Elmira	\$ 90,128	\$ 60,707
86	Guelph — Amberley	415,813	461,512
87	Harriston — Hwy. 86 (Bluevale)	229,617	156,979
88	Bradford — Hwy. 27 (Bond Head)	—	36,569
89	Hwy. 400 — Hwy. 23 (E. of Palmerston)	695,574	464,610
90	Barrie — Angus	64,810	81,421
91	Stayner — Duntroon	—	30,830
92	Elmvale — Wasaga Beach	59,021	54,765
93	Hwy. 11 (E. of Barrie) — Waverley	334,917	123,282
94	Callander — Hwy. 17 (S. of North Bay	3,394	27,853
95	Hornes Point — Wolfe Island	62,004	49,672
96	Quebec Head — W. End of Wolfe Island	832	144,881
97	Hwy. 6 (Freelton) — Hickson	3,871	283,642
99	Dundas — Hwy. 24 (N. of Brantford)	320,574	135,399
101	Quebec Boundary — Hwy. 17 (Wawa)	3,429,738	1,172,257
102	Thunder Bay — Sistonens Corners	543,189	79,978
103	Port Severn — Hwy. 69	—	197,945
105	Hwy. 17 — Red Lake	31,978	332,237
106	Hwy. 28 (Dale) — Hwy. 2 (Welcome)	135,560	13,284
108	Hwy. 17 — Hwy. 639 (Quirke Lake)	5,994	173,719
112	Hwy. 11 — Hwy. 66 (Swastika)	6,578	50,084
115	Newcastle — Peterborough	372,496	154,474
117	Jct. Hwy. 11 — Jct. 35	458,368	156,897
118	Dorset — Hwy. 69	676,050	92,654
121	Hwy. 28 — Hwy. 35 (S. of Fenelon Falls)	1,587,489	394,817
123	Hwy. 11 — (North Bay Airport)	—	2,256
124	Sundridge — Parry Sound	1,786,101	294,226
125	Hwy. 105 — Red Lake	150	25,386
126	Hwy. 401 — Hwy. 2 (London)	181	47,030
127	Maynooth — Hwy. 60 (E. of Whitney)	697,417	103,181
129	Thessalon — Chapleau	2,732,497	610,081
130	Port Arthur — Hwy. 61	146,497	47,806
132	Renfrew — Hwy. 41	34,521	131,979
133	Hwy. 33 (Millhaven) — Hwy. 401	—	29,678
134	Jct. Hwy. 7 — Jct. Hwy. 28 (Lakefield)	1,788	47,822
135	Hwy. 401 — Hwy. 2 (London)	467,287	27,130
136	Hwy. 24 — Orangeville	258,177	62,026
137	Hwy. 401 — Thousand Islands Bridge	—	18,842
138	Cornwall — Monkland	1,572,907	138,796
140	Hwy. 3 (Port Colborne) — Hwy. 20	61,235	66,790
141	Hayes Corners, Hwy. 69 — Jct. Hwy. 11	2,044,255	220,941
144	Sudbury — Hwy. 101	967,872	880,020
400	Toronto — Hwy. 12 (Coldwater)	430,055	1,738,151
401	(MCF) Quebec Boundary — Windsor	26,294,664	9,422,549

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
402	Hwy. 7 — Blue Water Bridge	\$ 8,181,333	\$ 49,947
403	Burlington — Brantford	3,201,577	523,007
404	Toronto — Hwys. 7 and 12	1,846,547	61,421
405	QEW — International Bridge (Queenston)	3,970	100,336
406	Hwys. 20 - 58 — QEW	12,802	121,296
407	Hwys. 35 & 115 — Hwy. 27	275,461	—
409	Belfield Expressway, Hwy. 401 — International Airport	4,526,422	118,739
410	Hwy. 401 — Hwy. 7 Brampton	1,911	—
416	Johnstown — Ottawa	153,447	—
417	Quebec Boundary — Ottawa	13,734,442	883,296
420	QEW — Rainbow Bridge (Niagara Falls)	58,218	55,924
427	QEW — Hwy. 401	1,484,405	520,312
451	(QEW) Toronto — Fort Erie	11,531,550	3,581,654
458	Ottawa Queensway	7,006	231,855
TOTAL KING'S HIGHWAYS		\$211,505,029	\$ 69,923,412

SECONDARY HIGHWAYS

500	Denbigh — Bancroft	6,450	182,502
502	Napanee — Marysville	10,641	—
503	Tory Hill — Kirkfield	527,819	410,811
504	Hwy. 620 — Apsley	—	78,248
505	Hwy. 46 — Uphill	528	59,967
506	Plevna — Hwy. 41	11,672	104,416
507	Hwy. 28 (Lakefield) — Hwy. 503	1,143,716	163,047
508	Barnstown — Black Donald Mines	64,128	154,074
509	Hwy. 7 — Snow Road Station	17,060	70,517
510	Magnetawan — Hwy. 124	—	8,392
511	Brightside — Hwy. 508	136	130,518
512	Eganville — Hwy. 60	1,691,905	115,962
513	Hwy. 132 — E. of Hyndford	—	43,246
514	Hwy. 500 — Hwy. 515	1,973	60,860
515	Hwy. 512 — Combermere	114,457	123,820
517	Twp. Rd. (Near New Carlow) — Hwy. 62	—	39,025
518	Sand Lake — Hwy. 69	37,704	357,162
519	Hwy. 121 — Redstone Lake	1,006,462	172,715
520	Burk's Falls — Ardberg	199,598	245,268
522	Hwy. 11 — West of Loring	2,503,065	380,609
523	Lyell Twp. Line — Hwy. 60	1,611	54,168
524	Hwy. 522 — Hwy. 534 (E. of Restoule)	—	14,332

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
526	Hwy. 69 — W. of Britt	\$ 1,257	\$ 12,250
528	Wolseley Bay — Hwy. 64	—	62,061
528A	Pine Cove Landing — Hwy. 528	6,132	24,779
529	Hwy. 69 — Hwy. 69 (Magnetawan River)	380	83,617
529A	Hwy. 529 — Bayfield Wharf	—	15,978
530	Hwy. 519 — Hwy. 35 (Carnarvon)	511	62,764
531	Bonfield — Hwy. 17	—	9,262
532	Hwy. 11 (S. of Bracebridge) — Hwy. 69	100	—
533	Mattawa — Hwy. 63	—	184,266
534	Powassan — Restoule	482,895	130,186
535	Hwy. 64 — RiviereVeuve	273,458	235,426
537	Hwy. 69 — Hwy. 17 (Wahnapitae)	161,949	87,360
538	Algoma Miners Loop	—	22,262
539	Hwy. 64 — Warren	5,663	218,363
539A	Hwy. 539 — Tertiary Road 805	60,530	29,331
540	Little Current — Meldrum Bay	2,148,683	595,226
540A	Hwy. 540 — Barrie Island	—	16,509
541	Sudbury — Skead	78,118	—
542	Hwy. 68 — Gore Bay	233,326	306,753
542A	Hwy. 542 — Tehkummah	—	9,904
543	Long Lake — Sudbury	6,173	—
545	Hwy. 541 — Milnet	12,968	—
546	Hwy. 17 — Mississagai Provincial Park	1,603,606	242,420
547	Hwy. 101 — Hawk Junction	555	16,048
548	Hilton Beach — Hwy. 17	1,077,355	234,864
549	Lake Panache — Hwy. 17	—	75,963
550	Sault Ste. Marie — Gross Cap	370	26,607
551	Province Bay — Hwy. 540	612,507	90,205
552	Hwy. 556 — Twp. Rd. (E. of Hwy. 17)	97,669	52,367
552A	Hwy. 552 — Hwy. 17	—	4,225
553	Massey — Richie Falls Camp	—	132,731
554	Hwy. 546 — Hwy. 129	34,726	46,108
555	Magog Lake — Hwy. 557	4,580	61,912
556	Hwy. 17 (Heyden) N. Easterly	42,868	112,497
557	Blind River Northerly	8,291	82,215
558	Haileybury — Montreal River	67,478	66,770
559	Hwy. 69 Nobel — Hwy. 69	—	98,373
560	Hwy. 11 — Hwy. 144 (S. of Gogama)	314,923	506,362
560A	Westree — Hwy. 560	—	25,606
561	Bruce Mines — Hwy. 638	—	72,603
562	Hwy. 11 (E. of Thornloe) — Hwy. 65	—	35,779
563	Batchawana — Hwy. 17	—	16,669
564	Blanche River Bridge — Hwy. 112	—	27,165
565	Pte. Aux Pins — Hwy. 550	—	4,225

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
566	Matachewan — Ashley Mine	\$ —	\$ 67,149
567	E. of Silver Centre — N. Cobalt	—	86,419
568	Hwy. 11 — Kenogami	—	5,922
569	Hwy. 11 — Hwy. 11 (S. of Englehart)	110,032	70,357
570	Sesekinika — Hwy. 11	—	7,553
571	Hwy. 562 — Earlton	—	14,312
572	Hwy. 11 Ramore — Hwy. 101	46,597	42,553
573	Charlton — Hwy. 11	—	48,101
574	Cochrane — Norembega	2,202	96,354
575	Jct. Hwy. 17 — Jct. Hwy. 64	—	101,866
576	Hwy. 101 — Kam-Kotia Mine	—	61,618
577	Hwy. 101 — Iroquois Falls	490,113	54,389
578	Iroquois Falls — Hwy. 11	5,320	19,223
579	Cochrane — Gardiner	257,673	82,920
580	Hwy. 11 — Lake Nipigon	—	23,693
581	Hwy. 11 — Remi Lake	—	12,462
582	Hurkett — Hwy. 17	—	12,303
583	Mead — Lac Ste. Therese	488,804	156,364
584	Hard Rock Mine — Nakina	—	130,769
585	Hwy. 11 — Pine Portage	—	68,923
586	Hwy. 11 — Lower Shebandowan Lake	—	11,717
587	Silver Islet — Hwy. 11 & 17	—	80,000
588	Stanley — Round Lake Road	195,752	220,983
589	Hwys. 11A & 17A — Dog Lake Road	14,995	80,392
590	Hwy. 130 — Hwy. 588 (Nolalu)	325,971	138,814
591	Hwy. 589 Northerly	390	17,397
592	Hwy. 11 (Novar) — Hwy. 11	—	50,657
593	Hwy. 61 — Hwy. 588 (Nolalu)	136,451	169,055
594	Dryden — Hwy. 17	44,225	66,714
595	Hwy. 597 — Hwy. 590	505,573	163,915
596	Kenora — N. of Minaki	511,480	256,108
597	Pardee — Hwy. 608	183,686	67,726
598	Hwy. 604 — Hwy. 128 (N. of Kenora)	374	8,181
599	Ignace — Tertiary Road 808	4,119,618	693,945
600	Hwy. 71 — Rainy River	1,550	216,635
601	Hwy. 17 — Dryden	7,154	46,047
602	Fort Frances — Emo	—	83,195
603	Hwy. 17 — Dymont	—	8,304
604	Hwy. 17 — Kenora Airport	508,450	15,888
605	Hwy. 17 — Rugby Lake	253	26,129
606	Hwy. 17 — Markstay	160	—
607	Hwy. 69 — (Big Wood) — Hwy. 64	—	35,622
607A	French River — Hwy. 607	—	7,024
608	Hwy. 61 — Hwy. 595 (S. Gillies)	284,746	86,166

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
609	Hwy. 105 — Clay Lake	\$ 84,088	\$ 33,079
610	Hwy. 67 — Hwy. 101 (Hoyle)	—	47,691
611	Hwy. 602 (Sherwood) Northerly	56,926	50,079
612	Hwy. 103 (Mactier) — Hwy. 69	—	18,019
613	Hwy. 602 — Lake Despair	1,560	89,773
614	Hwy. 17 — Manitouwadge	—	147,385
615	Hwy. 17 — Burditt Lake	114,013	40,132
616	Hwy. 101 — Palomar	—	7,834
617	Hwy. 11 (Stratton) — Hwy. 600	3,773	63,309
618	Red Lake — Madsen	—	21,856
619	Hwy. 11 (Pinewood) — Hwy. 621	—	99,148
620	Hwy. 62 — Hwy. 28 (Apsley)	75	131,384
620A	Hwy. 62 — Hwy. 28	—	1,413
621	Hwy. 11 — Lake of the Woods	653	179,320
622	Hwy. 11 (Atikokan) Northerly	—	23,384
623	Hwy. 11 — Sapawe	—	9,538
624	Hwy. 11 — Larder Lake	—	106,531
625	Caramat — Hwy. 11	—	99,501
627	Heron Bay — Hwy. 17	—	21,961
628	Red Rock — Hwys. 11 & 17	—	13,539
629	Timmins — Timmins Airport	—	25,044
630	Kiosk — Hwy. 17	158,324	169,909
631	South of Hornepayne — Hwy. 11	237,531	565,475
632	Hwy. 118 — Rosseau	—	62,213
633	Hwy. 11 — Kawene	—	11,385
634	Val Caron — Hwy. 144	1,017	—
635	Hwy. 17 — Ottawa River Bridge	—	6,134
636	Hwy. 11 — Frederick House	—	11,437
637	Hwy. 69 — Killarney	1,012	354,486
638	Dunns Valley — Echo Bay	5,156	114,264
639	Hwy. 108 — Hwy. 546	—	94,428
640	Hwy. 571 — Earleton Airport Entrance	—	6,759
641	Hwy. 17 — Pellatt	89,877	125,699
642	Algoma — Sioux Lookout	442,430	142,199
643	Hwy. 584 — Twp. Road to Cavell	—	43,299
644	Hwy. 69 (Pte. Au Baril) Easterly	58,445	3,196
645	Hwy. 529 — Bing Inlet	—	13,315
646	Pickle Crow — Central Patricia	—	20,615
647	Hwy. 17 — Blue Lake Provincial Park	—	29,642
648	Dyno Mine — West Jct. Hwy. 121	19,829	106,528
649	Bobcaygeon — Hwy. 121	—	55,413
650	ONR Right-of-Way — Hwy. 112	1,380	18,684
651	Hwy. 101 — Missanabie	289,738	141,473
652	Wade Lake — Hwy. 574	—	41,679

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
653	Portage Du Fonte Bridge — Hwy. 17	\$ 306,891	\$ 35,016
654	Hwy. 11 — Nipissing	1,835	82,888
655	Timmins — Ward Kidd Twp. Boundary	—	53,268
656	Hwy. 533 Northerly	—	18,583
657	Gold Pines — Hwy. 105	—	20,114
659	Hwy. 604 — Hwy. 128	537	44,087
660	Bala — Hwy. 103	1,051,870	61,841
661	Gogama — Hwy. 144	—	13,516
663	Hwy. 11 (W. of Hearst) Northerly	11,500	12,819
664	Hudson — Hwy. 72	—	31,951
665	Hwy. 17 — Richan	—	45,694
666	Kenora — Redditt	35,555	59,565
TOTAL SECONDARY HIGHWAYS		\$25,891,580	\$14,669,033

TERTIARY ROADS

800	Hwys. 11 & 17 — Cheeseman Lake	2,627	532,292
801	Hwy. 11 — Namewaminikan River	—	31,398
802	Hwy. 11 — Burchell Lake	—	32,312
803	Hwy. 575 — (Hwy. 101 — 3 mi. south)	—	9,114
804	Hwy. 105 — Lower Manitou Falls	—	58,823
805	Hwy. 539A (River Valley) — Pond Lake	29,242	77,557
807	Smooth Rock Falls — Fraserdale	—	245,509
808	Hwy. 646 — Otonkwin River	—	129,031
809	Hwy. 564 — End of Hwy.	—	9,721
810	Hwy. 553 — Ritchie Falls	—	52,679
811	Tertiary Road 800 Northwesterly	—	27,732
812	Manitou Road — Hwy. 11 Northerly	27,890	60,908
TOTAL TERTIARY ROADS		\$ 59,759	\$ 1,267,136

ACCESS AND INDUSTRIAL ROADS

708	Marchington Lake Road	887,839	—
719	Uchi Lake Road	4,097	—
759	Red Pine Road	—	12,559
773	Garden Lake Road	1,708,956	—
774	Hurket — Armstrong Road	18,480	—
775	Hurkett — Armstrong Road	415,104	—

MINISTRY EXPENDITURE BY HIGHWAY

ACCESS AND INDUSTRIAL ROADS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
795	Sherman Mine Road	\$ —	\$ 3,448
796	London East Industrial Road	81,640	—
799	Caramat — Manitouwadge Road	—	42,893
TOTAL ACCESS & INDUSTRIAL ROADS		\$ 3,116,116	\$ 58,900

UNINCORPORATED TOWNSHIPS

99	Statute Labour Boards	89,691	175,803
9	Local Roads Boards	1,975,242	1,540,934
7	Special Settlers	105,066	73,083
2	Indian Reserves	130,274	39,842
TOTAL UNINCORPORATED TOWNSHIPS		\$ 2,300,273	\$ 1,829,662

SPECIAL PROGRAMS

449	Tobermory Ferry	480,288	—
450	Other Ferry Service	2,065,138	1,361,462
706	St. Thomas By-pass	588,290	—
723	Thunder Bay Expressway	55,853	—
731	Sudbury By-pass	203,086	43,140
732	North Bay By-pass	783,162	—
733	Niagara Freeway	1,455	—
735	Kitchener-Waterloo Expressway	1,714,966	219,180
737	Hanlon Expressway	998,184	157,708
762	East Main Street Tunnel	10,316	47,964
765	Townline Road Tunnel	—	18,424
952	Sidewalks	33,395	8,673
954	Storm Sewers	95,512	—
955	Commuter Rail	(74,261)	(22,025)
956	Truck Mounted Flashing Signs	—	3,016
957	Changing Speed Limit Signs	58,944	—
959	Ice Storm Charges	—	26,390
7087	E.C. Row Expressway	1,765,137	60,429
7118	Brantford Expressway	495,094	15,574
	Service Centres	—	872
8905	Lands & Buildings	584,678	1,203,516
8954	Weigh Scales	9,110	155,536
	Development Roads	7,855,282	137,858
	Connecting Links	11,450,353	759,633
TOTAL SPECIAL PROGRAMS		\$ 29,173,982	\$ 4,197,350

MINISTRY EXPENDITURE BY HIGHWAY

	CONSTRUCTION	MAINTENANCE
HIGHWAY TOTALS	\$272,046,739	\$ 91,945,493
Sundry Unallocated, District Office Administration, Engineering Building, Inventory Charges, etc.	(4,862,108)	16,506,973
TOTAL EXPENDITURE	\$267,184,631	\$108,452,466

**CONVICTIONS REGISTERED
UNDER THE
HIGHWAY TRAFFIC ACT**

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION OF ACT	OFFENCES	1974 JAN-DEC	1975 JAN-DEC
6	Fail to register a vehicle	1,846	1,628
7 (1)	False statement	117	80
7 (2)	Fail to notify new address	4,505	3,723
8	Fail to have number plates	11,815	12,055
9	Violations as to number plates	5,405	5,063
10	Improper use of number plates	867	633
13	Fail to have operator's licence	22,837	16,169
14	Fail to produce operator's licence	20,423	13,978
16	Fail to have chauffeur's licence	387	242
17	Fail to produce chauffeur's licence	1,786	927
18	Operation of motor vehicle by person under 16	227	311
27 (2)	Unlawful possession of permit	16	43
27 (3)	Unlawful possession of licence	59	171
30 (b)	Drive while licence suspended*	0	23
35	No garage licence	14	11
36	Record of wrecked vehicle violation	65	20
37	Improper lights	13,235	10,311
39	Defective brakes	3,268	2,308
41	Faulty equipment (mirror, windshield etc.)	1,125	739
47	Driver's view obstructed	2,314	150
48	Windows obstructed	0	1,367
49	Excessive noise/smoke/fumes	32,239	28,173
50	No slow-moving-vehicles sign	85	50
53	Fail to have proper trailer attachments	739	729
55 (2)	Unsafe vehicle	5	6
55 (3)	Failing to submit to vehicle inspection	629	816
57	Drive unsafe vehicle	4,570	3,753
58	Certificate of mechanical fitness violation	73	142
61	No name of owner on commercial vehicle	2,741	377
62	Drive/ride motorcycle no safety helmet	1,570	1,316
64	Overweight	77	94
65 (6)	Special permit violation	691	427
66 (1)	Overload in excess of permit	3,374	3,608
66 (2)	Fail to produce commercial ownership permit	1,829	1,208
66 (4)	Spring regulations — overload	104	59
68	Overhanging load	2,655	2,209
70	Excessive width or length of vehicle	1,653	1,216
82	Speeding 30 mph or more over limit	29,002	5,302
	Speeding more than 19 mph less than 30 mph	41,271	39,677
	Speeding more than 10 mph less than 20 mph	184,839	190,119
	Speeding under 11 mph	427,664	472,254
83	Careless driving	19,267	19,031
85	Unnecessary slow driving	310	271

* Royal Assent February 6, 1975

**CONVICTIONS REGISTERED UNDER
THE HIGHWAY TRAFFIC ACT**

SECTION OF ACT	OFFENCES	1974 JAN-DEC	1975 JAN-DEC
86	Fail to obey signal of police officer	349	277
87	Fail to yield right of way	360	304
88	Fail to stop at through highway	58,070	57,817
90	Fail to obey yield sign	1,079	1,015
91	Fail to yield — from private road	6,630	6,761
92	Pedestrian crossover violation by driver	7,430	5,427
93 (1)	Improper right turn at intersection	3,409	3,521
93 (2)	Improper left turn at intersection	5,308	5,497
93 (3)	Improper left turn into intersecting highway	4,747	4,426
93 (4)	Improper left turn from one-way highway	1,697	1,669
93 (5)	Improper left turn into one-way highway	591	344
93 (6)	Improper left turn from one-way highway to one-way highway	1,701	1,777
94 (1)	Fail to signal for turn	11,451	11,958
94 (2)	Fail to signal moving from parked position	2,803	2,864
94 (4a)	Improper manual signal	8	0
94 (5)	Improper directional signal	67	105
94 (6)	Improper use of signaling device	117	101
94 (7)(7b)	Fail to signal	172	144
95	Prohibited U turns	459	586
96 (5)	Disobey a red signal light	43,529	41,905
96 (6)	Disobey an amber signal light	13,012	13,018
96 (7)(8)(9)	Flashing red, amber, green arrow	1,619	1,561
96 (10)	Fail to give right-of-way to pedestrian	891	884
96 (11)	Prohibited turn	29,434	29,460
96 (19)	Disobey traffic signal	8	2
97	Drive right side of multi-lane highway	791	506
98 (1)(2)	Fail to share the road	3,246	2,830
98 (3)	Fail to move to right	403	337
98 (4)	Vehicle or horsemen overtaking others	569	486
98 (5)	Horsemen or vehicles overtaking bicycles or tricycles	19	13
98 (6)	Improper passing	14	15
98 (7)	Improper passing	460	2,076
99	Drive left of centre of highway	2,842	2,533
100 (1)	Passing to right of vehicle	13	19
100 (2)	Unsafe passing to the right	4,494	4,248
102	Wrong way on a one-way street	8,502	7,603
103 (a)	Unsafe lane change	5,655	5,587
103 (b)	Drive in centre lane of three lane highway	107	56
103 (c)	Fail to drive in slow moving traffic lane	1,402	1,429
104 (a)(b)	Improper driving on divided highway	898	992
105 (1)	Following too closely	19,344	17,853
105 (2)	Follow too close in commercial vehicles	455	374
106 (1)	Fail to yield to fire department vehicle etc.	316	278

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION OF ACT	OFFENCES	1974 JAN-DEC	1975 JAN-DEC
106 (2)	Following a fire department vehicle	29	22
109	Crowding driver	632	568
110	Fail to stop for crossing (signals)	255	216
111	Drive through, under or around railway barrier	212	220
112	Improper opening of vehicle door	376	465
113 (1)	Improper approach or passing a stopped streetcar	141	133
113 (2)	Pass streetcar on left side	54	49
114	Improper driving when approaching horses	0	0
115	Fail to use passing beam	2,469	1,901
116	Improper parking on highway	1,999	1,588
116 (8)	No warning lights on commercial vehicle	66	30
116 (9)	No flares	34	35
117	Racing	205	179
119	Failure to stop school bus or public vehicle at railway crossing	16	21
120 (2)	Fail to stop for school bus	2,802	2,751
120 (3)	School bus: fail to actuate signals	20	15
120 (5)	School bus: failure to cover signals and signs	9	7
124	Littering highway	1,350	840
125 (2)	Fail to obey a direction sign	4,388	4,331
139	Fail to report an accident	2,772	2,924
140	Fail to remain at the scene of accident	2,718	2,660
141	Fail to report damage to highway property	738	635
	Other offences	13,606	408
	TOTAL	1,125,060	1,099,445

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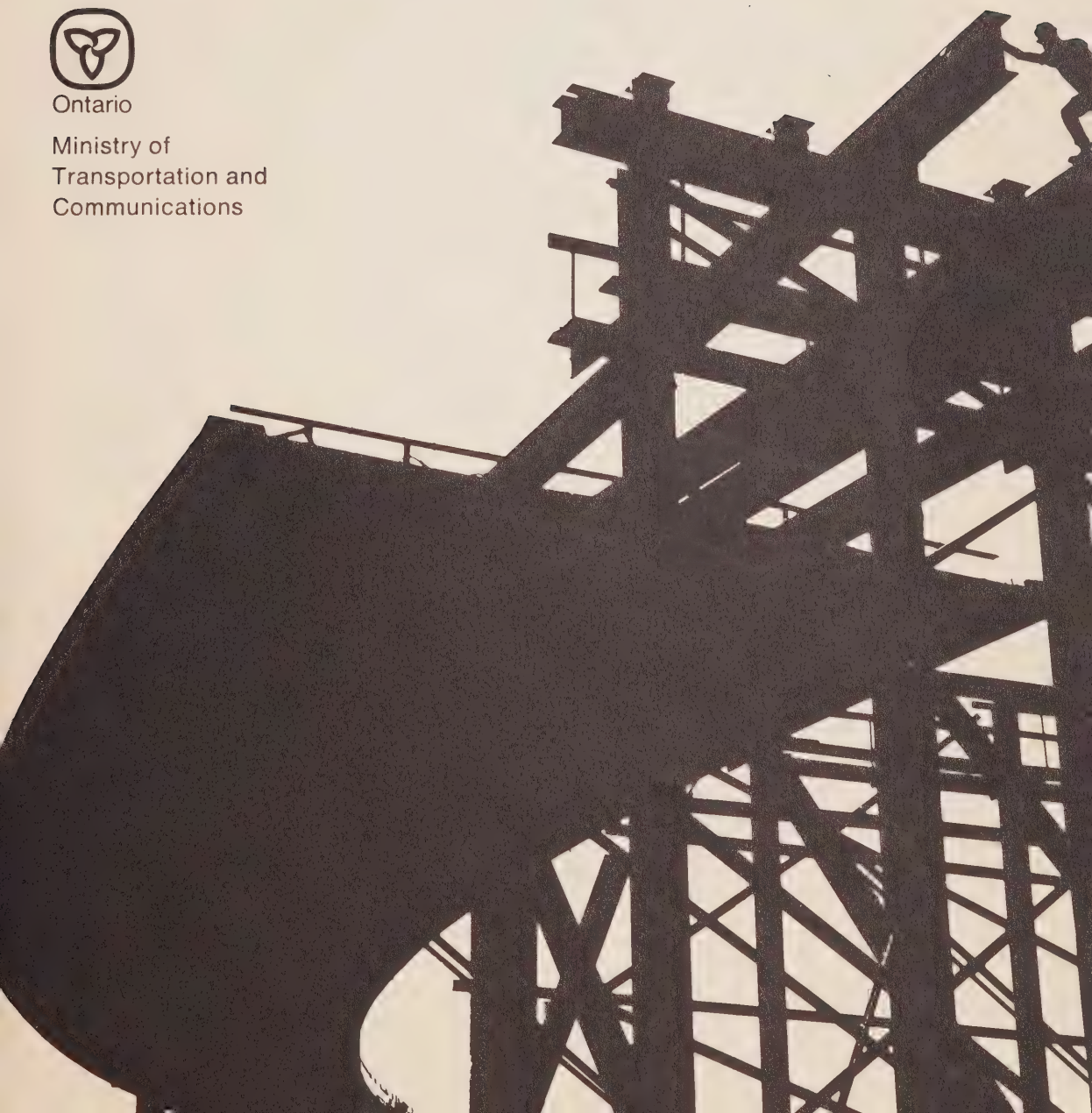
Government
Publications

ANNUAL REPORT 1976-77



Ontario

Ministry of
Transportation and
Communications



ANNUAL REPORT

For the
fiscal year
ending
March 31, 1977



Ontario

Ministry of
Transportation and
Communications

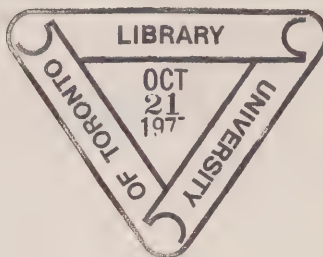


Office of the
Minister

Ministry of
Transportation and
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario



TO THE HONOURABLE PAULINE M. McGIBBON, O.D.,
B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario.

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before
you the Annual Report for the Ministry of
Transportation and Communications for the fiscal
year ending March 31, 1977.

Respectfully submitted

A handwritten signature in dark ink, appearing to read 'James Snow', written over the typed name and title.

James Snow
Minister.



Office of the
Deputy Minister

Ministry of
Transportation and
Communications

416/248-3604

East Building
Downsview Ontario

TO THE HONOURABLE JAMES SNOW

Minister of Transportation and Communications, Ontario

Sir:

I have the honour to present the report of the
activities of the Ministry of Transportation
and Communications for the fiscal year ending
March 31, 1977.

Respectfully submitted

A handwritten signature in cursive script that reads "Harold Gilbert".

Harold Gilbert
Deputy Minister.

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DEPUTY MINISTER'S SUMMARY

Despite budget restraints, the Ministry continued to provide the residents of Ontario with improved transportation and communication services this past fiscal year.

Notably, this task was accomplished with increased efficiency and productivity. Success can be attributed, in great measure, to reorganization of the Ministry. By moving the decision-making process closer to the area involved, it was possible to upgrade the level of service and resolve day-to-day problems with greater ease and speed.

At the same time, reducing Ministry complement by 1,060 through normal attrition such as retirements and resignations, released additional funds for a wide variety of current and new projects.

Under the Ministry's highway improvement program, \$114 million was spent on highway maintenance. And, despite a short construction season, more than \$229 million was spent on new highway construction and 164 new contracts were awarded during the fiscal year. This involved work on two-lane, multi-lane divided and undivided highways and structures at numerous locations across the province. Also, in order to provide relief to traffic congestion during peak periods and extend the life of existing highways, 26 new passing lanes were completed in Northern Ontario.

Inclement weather, however, did not prevent the Ministry from proceeding with a number of new transit projects necessary for the continued development of a well-balanced, integrated transportation system in Ontario.

Under its transit subsidy program, the Ministry granted a total of \$143 million to Ontario municipalities for improvements to their public transportation facilities.

Funds were also allocated for improvements to Ontario's GO Train and GO Bus service. A new, direct GO bus route to the York Mills subway station was initiated for the residents of Pickering, Ajax, Whitby and Oshawa. Provincial funding was also approved for the construction of a new GO rail station at Clarkson.

In addition, the Ministry announced funding for a two-year pilot project designed to accurately identify the demand and cost of new transit modes for the physically disabled.

This project, undertaken in conjunction with the Ministry of Community and Social Services and the Secretariat for Social Development, was established in five Ontario municipalities.

Northern Ontario also benefited from expanded transportation services this past year. Four, completely modernized, European diesel-electric passenger trains were purchased to provide fast, efficient rail service to northeastern Ontario.

norOntair, the provincially-sponsored air commuter service, continues to be one of the Ministry's most successful projects. Linking 16 northern communities, it is now carrying nearly 8,000 passengers monthly.

Elsewhere in the north, new airport and telephone facilities went into operation last

September at Fort Hope, 225 miles north of Thunder Bay. This is the ninth airport completed in the Ministry's airport development program in the remote north.

The new communication facilities at Fort Hope, the first exchange to be completed under the Ministry's Remote Northern Telecommunications project, is now providing residents with reliable local and long-distance telephone service.

Work is now underway to provide the Village of Shining Tree and areas around Marten River and Tilden Lake with full telephone service.

Highway safety is another major Ministry concern and the reason for new legislation being passed each year. For instance, the seat belt legislation and the lowering of speed limits aided in dropping Ontario's 1976 traffic-related fatalities to the lowest level recorded since 1964.

A new driver licence classification was also introduced last year, aimed at matching a driver's skills and responsibilities with the kind of vehicles driven. All drivers will have a licence relating to a specific class; thus a driver will be permitted to drive only the vehicle indicated in that class.

Legislation was passed requiring motorcyclists to operate with their front and rear lights on at all times, day and night. Moped drivers must now wear approved motorcycle helmets. And, legislation requiring dump truck operators to cover loads helped eliminate the possibility of accidents occurring as a result of flying particles from these vehicles.

The Ministry's motor vehicle inspection program was expanded to ensure that all dump trucks and tractor trailers hauling dump trailers undergo periodic inspection and meet prescribed safety inspection standards.

For the safety of school children, school crossing guards — persons 16 years of age or older — must display a special, Ministry approved, school crossing stop sign when signalling traffic to stop.

New legislation governing the use of motorized snow vehicles was also passed. Under this new law, snowmobilers must possess an Ontario motor vehicle driver's licence or

a new licence issued to graduates of an approved snow vehicle operator's course when operating a snowmobile on a public trail, crossing a highway, or operating on a road.

To make snowmobile safety education readily available, the Ministry joined with the Ontario Federation of Snowmobile Clubs and the Ontario Safety League to produce a snow vehicle operator's course to train area instructors.

Saving energy, as well as lives, was another important Ministry objective last year. Under the Ministry's energy management program, a number of innovative steps were taken to help reduce Ontario's overall net energy bill.

For example, replacing larger cars with compacts and switching 175 snow removal units to diesel fuel resulted in a total saving of more than 400,000 gallons of precious gasoline.

Meanwhile, Ministry researchers continued their studies to determine if methanol can be produced in sufficient quantities to make it a viable alternative to fossil fuels.

And finally, as a contribution to the observance of the 100th anniversary of the invention of the telephone by Alexander Graham Bell, a book entitled A History of the Independent Telephone Industry in Ontario, was released by the Ministry.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year 1976-77, with comparative figures for the preceding year:

	FISCAL YEAR ENDING	
	March 31, 1976	March 31, 1977
Ministry Administration	\$ 24,313,676	\$ 25,772,262
Planning Research and Development	13,742,621	19,665,356
Safety and Regulation	24,963,478	28,688,117
Provincial Roads	437,660,331	402,098,252
Provincial Transit	28,151,518	40,095,489
Air	3,596,179	6,464,207
Municipal Roads	288,945,199	299,141,400
Municipal Transit	141,124,657	147,272,790
Communications	1,886,746	3,120,758
TOTAL GROSS EXPENDITURE	\$ 964,384,405	\$ 972,318,631

DEPUTY MINISTER'S OFFICE

OFFICE OF WOMEN'S PROGRAMS

In keeping with the goals of the Office of Women's Programs — to design, develop and co-ordinate the implementation of the Affirmative Action Program for MTC consistent with government policy — this office was involved in the following activities:

- In May and June 1976, 12 half-day Affirmative Action Awareness Seminars were held for approximately 450 managers.
- In June 1976, a two-day conference was held for the program's 69 unit representatives, at which time Affirmative Action Council members were elected.
- During the 1976/77 fiscal year, seven Affirmative Action Council meetings were convened.
- In September 1976, a circular regarding the Ministry's policy on sex stereotyped language in publications was issued.
- In October 1976, the Office of Women's Programs was represented at both the Ministry's orientation seminar and the Ottawa District Maintenance Engineers' Conference.
- In November 1976, an initiative of the Affirmative Action plan was fulfilled with the issuance of a circular regarding the Ministry's central training fund.
- In December 1976, in conjunction with Staff Development Office, four half-day Time Management seminars were held for approximately 45 managers and their secretaries.

- From January 1977 to March 1977, three career development workshops were offered, in conjunction with the Staff Development Office.
- During the 1976/77 fiscal year, eight competitions were monitored to ensure equal opportunity.
- During this same time there were 12 instances of employee counselling.
- Three special events programs were held at lunch time, consisting of two slide presentations and a personnel panel.
- Two meetings were called of those women included in the SAAC inventory.

This office will continue to maintain high visibility. Future plans include ongoing meetings with management and female employees at all levels, both in head office and the regions.

STRATEGIC POLICY SECRETARIAT

The Secretariat is a small group formed on January 1st, 1976 to plan the introduction into the Ministry of a strategic policy development and planning process and to manage, and make direct contribution to that process. It has a staff of 12.

During its first full year of operation, the Secretariat has:

- Provided support services to the Senior Policy and Management Committees of the Ministry.
- Designed and implemented major components of a strategic policy development

and planning process to enable the Ministry to produce Strategic Guidelines for the 1978/82 period during the spring of 1977.

- Managed the strategic policy development and planning process by co-ordinating the production, analysis and presentation to Ministry management of the documents required as input to their assessment of the Ministry's position and prospects prior to guideline formulation.
- Identified issues arising from sources external to the Ministry, including economic and social trends, public expectations and the policies and stated objectives of government. The impacts of such issues were reviewed by Senior Managers of the Ministry.
- Maintained liaison with central and ministry agencies, other ministries and other governments.
- Assisted the Program and Resources Planning Committees in the ongoing task of developing and implementing their role in the strategic policy development and planning process.
- Undertaken a series of presentations to Ministry staff outlining major government policy issues and the Ministry's new strategic policy development process.

COMMUNICATIONS DIVISION

The Communications goal of the Government of Ontario is to ensure that the diverse interests of the people of Ontario are fully represented in developments associated with radio and television broadcasting, cable and special purpose video, data transmission systems, telephone and telegraph services and the use of communications satellites.

The basic responsibilities of the Communications Division are to develop policies on current communications issues and to assess means of improving communications services to the residents of Ontario.

During the Fiscal year, the Communications Division undertook a wide range of activities:

- Provided financial, technical, legal and economic support to the Ontario Telephone Service Commission in its regulatory activities and engineering assistance to the

independent telephone companies operating in Ontario.

- Proceeded with Bell Canada towards the completion of a joint project to provide basic reliable telecommunications services to the remote communities of northwestern Ontario and with the Ontario Northland Transportation Commission to improve service to communities along the coasts of Hudson and James Bays.
- Developed a set of telecommunications policy objectives for Ontario.
- Developed an Ontario position regarding guidelines for the introduction of Pay-TV.
- Developed policy guidelines regarding the provision of basic broadcasting and cable services in northern Ontario.
- Put forward Ontario's position and views on issues affecting the allocation of spectrum in Ontario, including proposed radio licensing policies regarding the use of the 12.7-12.9 and 14.5-15.35 GHz frequency bands and the possible revised use within the 406-960 MHz frequency band.
- Completed a major research report on computer communications policy issues affecting the Government of Ontario.
- Represented Ontario interests in interventions before the Canadian Radio-television and Telecommunications Commission regarding rate increase applications by Bell Canada and CN/CP Telecommunications; and regarding proposed rates to be charged cable companies for use of utility support structures.
- Put forward representations to the Canadian Radio-television and Telecommunications Commission on such cable and broadcast issues as the importation of distant FM signals to Ontario cable systems and the provision of ethnic broadcasting services in the Metropolitan Toronto area.
- Continued negotiations with the federal government on the legislative and regulatory frameworks under which communications systems will operate in Canada.
- Participated in the Conference of Federal and Provincial Ministers of Communications in Edmonton, March 29-30, 1977.

After a review of its first two years of operation, the Communications Division was reorganized during the 1976-77 fiscal year. It is

now comprised of the Communications Policy Branch and the Communications Operations Branch.

PRIORITY DEVELOPMENT BRANCH

This branch is responsible for the development and management of current and long-range capital construction programs of the Ministry, and for ensuring maximum effectiveness of the legislated funds to be expended. Long-range programs for proposed transportation systems are developed by a priority methodology which analyses and recommends viable programs within financial and planning period limits.

The Advance Program consisted of 2,642 projects at the end of the fiscal year. Of these, 524 were added during the year. Approximately 931 groups of projects had active pre-engineering schedules. During 1976, 141 contracts were advertised; 140 were awarded.

MANAGEMENT IMPROVEMENT BRANCH

The Management Improvement Branch was formed in April, 1976. It is composed of the

former Management Science Office and former Management Improvement Co-ordinator's Office. Responsibilities of the branch include the implementation of the Ministry-wide Management Improvement Program and the continuing identification and implementation of organizational, operational and process improvements.

During the past year, the branch's efforts were primarily directed to the implementation of the Management Improvement Program. This Ministry-wide project involved head office and regional/district management. Highlights include:

- Identification of head office program delivery activities that could be decentralized to the regions.
- Monitoring the development of decentralization plans and subsequent implementation.
- Amalgamation of regional and district organizational structures.
- Reorganization of the Planning Division; formation of the Highway Engineering Division, formerly Operations and Design Divisions; formation of the Drivers and Vehicles Program Development Branch and restructuring of the Communications Division.
- Co-ordination of reductions in permanent complement and temporary staffing.

PLANNING, RESEARCH AND DEVELOPMENT

PLANNING AND DEVELOPMENT DIVISION

The division is responsible for transportation program development, planning and evaluation and for management of the Ministry's indirect transportation programs. The present organizational structure was established during 1976 as the result of internal reorganization and the addition of municipal road and municipal transit program management responsibilities. The organization consists of the Municipal/Provincial Transportation Branch, the Urban and Regional Transportation Planning Office, the Economic Policy Office and the Co-ordinator, Intergovernmental Relations.

MUNICIPAL/PROVINCIAL TRANSPORTATION BRANCH

The branch is responsible for program planning and management for municipal road, municipal transit and air services programs, for program planning for provincial roads and transit programs and for the administration and development of environmental policies.

The branch comprises five offices: Municipal Roads, Transit, Aviation Services, Provincial Roads Planning, and Environmental.

Municipal Roads Office

During 1976, through the reorganization of the Ministry, the Municipal Roads Office moved from Operations Division to the Planning and Development Division. The direct responsibility for program delivery was transferred to the regional offices.

The Municipal Roads Office is now responsible for program development, evaluation and policy matters as well as overall budget control for all municipal road subsidy programs.

During the year, 826 municipalities and 39 Indian Reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition 45 municipalities received subsidies under the Traffic Signal Program and 196 municipalities received subsidies under the Special Winter Maintenance Program for 1977 expenditures prior to March 31st. The breakdown was as follows:

	Road Mileage	Approved Expenditure	Subsidy Paid
Normal Subsidy Program			
Metro Toronto	433.1	\$ 31,436,012.	\$ 15,718,006.
Regional Municipalities	3,901.0	77,008,416.	42,811,906
Counties	7,823.5	60,188,698.	39,977,641.
Townships	46,456.8	137,496,151.	75,905,487.
Urban Municipalities	19,987.5	204,657,464.	93,934,397.
	78,601.9	\$510,786,741.	\$268,347,437.
Traffic Signal Program	—	\$ 3,469,701.	\$ 1,734,850.
Special Winter Maintenance	—	\$ 2,099,760.	\$ 1,889,784.

In 1976 the office administered a Connecting Link Program involving 169 projects and a provincial contribution of \$13,430,700. This includes maintenance contributions to towns and villages, previously administered under the Provincial Highway Maintenance Program.

The Development Roads Program consisted of 65 projects with a total provincial contribution of \$6,350,100.

During 1976 the Ministry expended \$2,094,300 in providing aid to 205 local Roads

Boards, 27 Statute Labour Boards, 25 Indian Reserves and 113 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the Province.

A further sum of \$3,772,500 was expended without local participation on the replacement of bridges and on grade improvements involving 117 projects on these roads.

Of the 126 larger-spending local municipalities designated for Municipal Roads Needs Studies, 48 started studies in 1976, while 60 of the 68 which started studies in 1975 completed them. These studies will assist the Ministry in establishing an equitable system of allocating funds.

Transit Office

The Transit Office is responsible for transit program policy development and evaluation, administration of municipal transit financial assistance programs, development and management of operational improvement demonstration projects and for carrying out, or assisting in, the planning for municipal and provincial transit system improvements.

Altogether, 60 municipal transit systems received financial assistance. A ceiling was placed on the amount of operating subsidy payable to municipalities, which was based on the operating subsidy received in 1975 plus five per cent. The total operating subsidy paid in 1976 amounted to \$45,704,458. In the same year \$23,555,100 subsidy was paid to municipalities to cover 75 per cent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, bus passenger shelters, transit terminals and maintenance facilities. Subsidy for the rapid transit construction program amounted to \$74,511,973. This covered 75 per cent of the cost of subway construction in Metropolitan Toronto with the major expenditures allocated to the Spadina Rapid Transit Line.

At a cost of \$3,504,248, 11 operational improvement projects were either in progress or completed during the year.

A new method of computing operating financial assistance for municipal transit systems was developed. The straight deficit-sharing approach has been shelved in favour of the one which creates incentives in relation to revenues and costs.

The following projects and tasks of interest have been started or completed by the office during the year:

- Financial and technical assistance to 20 municipalities for bus, rapid transit and related transit operational projects.
- Technical and financial assistance for the development of an automated transit communication, monitoring and data collection system.
- A study recommending the demonstration of articulated buses in Hamilton, Mississauga, Toronto and Ottawa.
- Initiation of five pilot projects in Chatham, Sault Ste. Marie, Toronto, Peterborough and Ottawa to investigate transit service for the physically disabled.
- Funding the development through Urban Transit Development Corporation of light rail transit vehicles (L.R.V.'s).

Aviation Services Office

This office was formed this year to co-ordinate and administer the Ministry's Air Program activities. Ongoing responsibilities include the development and review of air policies and standards related to the Ministry's air program and the overall administration of this program. The office monitors federal aviation programs and initiated a complete review of the federal standards and criteria used to develop major airports. The office contributed to a major study of the Toronto Island Airport.

In 1976, improvements were made to 11 remote airports including the completion of major works at Fort Hope. Construction equipment was purchased and delivered to Kashechewan so work could begin on the construction of a new airport in 1977. Subsidies amounting to \$154,000 were paid to eight municipalities to improve municipal airports.

The ten airports constructed in the remote airport system were maintained for year round operation at a total cost of \$675,000.

The office monitored the performance of norOntair, which is administered by the Ontario Northland Transportation Commission.

Provincial Roads Planning Office

This office is responsible for developing, analysing and evaluating that part of the Provincial Roads Program plan that deals with

capital improvements. The basic framework for preparing the improvement program plan is transportation service. This is measured throughout the road systems by the application of service standards as a means of identifying the deficiencies to be removed. Other components of the improvement program deal with additions to the existing systems, in response to specific transportation objectives within the Ministry or to objectives of the provincial government.

This year marked the initial effort by the office in preparing its input to the overall Provincial Roads program plan.

An activity of the office, which supports the main program planning effort, deals with the management of a reference and information system for highway inventory, accident and traffic volume data. Work continued on the development of a new linear reference system for this data and preparation was made for the eventual change to metric units of measurement.

Studies of special issues and unresolved transportation problems associated with the Provincial Roads program are undertaken by the Projects Section of this office.

The Corridor Control Section of the office, which has the responsibility of developing policy that serves to protect the integrity of the Provincial Road corridors, continued its main function of reviewing various land development plans and land use proposals throughout the province. In addition, several policy guideline papers were prepared for the use of the regional offices to facilitate their administrative control of the provincial road corridors.

Environmental Office

This office is responsible for the development of technical and administrative policy for natural and cultural environmental matters related to all Ministry programs.

During the 1976-77 fiscal year, the regionalization of environmental planners working on provincial roads projects was completed. At the end of March 1977, Environmental Units were established in the Ministry's regional offices in Downsview, London, Kingston, North Bay and Thunder Bay. These units are in the Provincial Roads Planning Design Sections.

The Environmental Office continued its role

of providing environmental information for each stage in the planning and design process according to the sensitivity of the project and staff availability. Advances were made in the ongoing refinement of environmental assessment methods previously developed. A new policy relative to noise barriers in residential areas along major freeways was developed and approved.

With respect to the requirements of the Environmental Assessment Act, the Environmental Office updated the list of Exemptions for the Provincial Road Program, the Communications Program, the Remote Northern Airstrips, T.A.T.O.A., O.N.T.C. and U.T.D.C. This office along with the Ministry's Environmental Assessment Steering Committee, made progress on the Class Environmental Assessments and the development of the format for the Environmental Assessments, and the Environmental Study Reports. Monitoring of the cost-effectiveness of environmental provisions in specific contracts was initiated.

Urban and Regional Transportation Planning Office

This office is responsible for ensuring the availability of up-to-date long-range, multi-modal transportation planning information as required for strategic policy decisions, program planning and program delivery activities. Typical of the past year's major office activities are:

- Highway traffic forecasts for the annual inventory update.
- Staff background studies on transcontinental rail passenger services.
- Numerous systems planning studies as input to program planning for the provincial highway system.
- Development of policies regarding access to remote northern communities.
- Input to provincial and local regional development plans and programs.
- Technical and financial assistance to Metropolitan Toronto and other municipalities in the preparation of the transportation component of their official plan.

Economic Policy Office

This office is the locus of economic expertise within the Ministry. It has three sections with different functions.

During the past year, major efforts of the Market Studies and Forecasting Section were focussed on the examination of the construction industry in the province, to determine the impact that the government's spending cut-backs were having on this sector. Together with the Ministry of Industry and Tourism, a survey of industries was initiated to determine the transportation requirements of the different components of the industrial sector. An economic analysis of the transit subsidy program was undertaken.

The Transportation Pricing Studies Section continued with the small business transportation advisory program, in conjunction with the Ministry of Industry and Tourism. Some 30 firms received an analysis of their transport requirements, with suggestions for reducing their costs. A transportation newsletter was circulated regularly, as part of the "Manufacturing Opportunities" bulletin put out by MIT.

The Modal Studies Section monitored the hearings of the Select Committee on Highway Transportation of Goods for the Ministry, and made presentations to this Committee with the Transportation Pricing Studies Section. The new Federal Rail Costing Order led to a substantial staff involvement, which will continue through 1977 and 1978. Several rail abandonment hearings and associated analyses occupied most of the year.

Co-ordinator, Intergovernmental Relations

The position of Co-ordinator, Intergovernmental Relations was instituted as part of the reorganization, to co-ordinate the policy implications of, and develop strategic positions on, interactions with Canada and with other provinces in the transportation field, and to provide general co-ordination between intergovernmental policy aspects of the transportation and communications programs.

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division is comprised of four units: Executive Area; Engineering Research and Development Branch; Systems Research and Development Branch; and the Management, Information and Testing Systems Unit.

Executive Area

This group provides control of the division's

administrative needs including the budget, manpower planning, the Ontario Joint Transportation and Communications Research Programs, and the Quarterly Project Progress Report.

ENGINEERING RESEARCH AND DEVELOPMENT BRANCH

This branch conducts research and development to improve the physical attributes of highways — pavement, bridges and other highway structures, and materials and quality assurance.

The branch also investigates load-related problems arising from the regulation of commercial vehicles on the highways; undertakes pavement safety and environment-oriented research; conducts cost-effectiveness studies to determine the future cost implications of engineering decisions; and co-ordinates the Ministry's metric conversion program.

Pavement Research and Development

Pavement research engineers develop better design methods for predicting pavement behaviour and performance; improved ways of evaluating load capacity and load-imposed damage; techniques for protecting pavements from environmental effects; and means of predicting and planning more effective rehabilitation and maintenance.

A computerized design system for flexible pavements has been developed to aid pavement designers in selecting the most economical practical design. OPAC (Ontario Pavements Analysis of Costs) provides a thorough analysis of design considerations, shortening design time and eliminating overdesign.

A computer program has also been developed to utilize the frost-related properties of various roadway and insulation layers.

Structural Research and Development

This office undertakes research to improve the design, performance and evaluation of the structure components and frameworks of highway bridges.

Working towards more realistic load criteria, structural research engineers have developed the Ontario Bridge Formula to express the strength of existing bridges. It will be used to enforce the province's vehicle weight laws.

Combined with load factors, this formula forms the basis of a new design load and will be incorporated in the Ontario Bridge Design Code.

The proposed Code will reflect specific Ontario conditions and provide, through the Bridges Act, legal criteria by which all highway bridges will be designed to uniform, limit state conditions. The result, more rational, economic and safe bridge design in Ontario.

Materials and Quality Assurance Research

Research in this office is conducted to study the physical properties, behaviour and in-service performance of construction materials and to improve their use in pavements and structures by developing better construction and maintenance systems.

In experiments to restore the skid-resistant qualities of existing pavements, asphalt overlays and transverse grooving have been applied to sections of Toronto's Highway 401 Bypass. Monitoring has revealed a substantial reduction in the number of skidding accidents on the treated sections.

Another major research area is the investigation of new techniques and construction procedures for rehabilitating deteriorated bridge decks and constructing new decks.

Earth and Environment Research

This office conducts research to improve knowledge and techniques for using earth resources in highway building and to minimize natural or man-made impacts on the highway user or environment from highway construction, maintenance or operation.

Research engineers develop means of minimizing adverse effects of erosion, scour and stiling; improve practices for weather-dependent maintenance and operations; and techniques for measuring environmental impacts.

Technology Resources

Technology and Resources undertakes special projects involving advanced applications of physical, chemical and electrical processes. It also develops and demonstrates special construction and maintenance techniques.

Projects include studies in the use of pesticides, herbicides and deicers in highway maintenance; investigations of the properties and physical chemistry of asphalt cements and other organic materials; and the development of means to prevent corrosion of exposed or embedded steel; and development of better traffic marking systems. The material aspects of energy conservation such as recycling waste petroleum or byproducts are also investigated.

A means of preventing corrosion of the reinforcing steel in bridge decks by passing electricity through a conductive layer on the deck, is also being developed by this office.

Value Engineering

Value Engineering supports the Ministry's programing and policy planning functions and other research and development programs.

Research engineers develop engineering systems, computerized or otherwise, to obtain optimum solutions at project design level; develop investment packages to obtain maximum economic returns on a network level; and develop predictive relationships and factual data for making sound engineering and cost-related management decisions. They also devise ways of increasing efficiency in routine engineering procedures and, where applicable, incorporate economic and value engineering analyses in existing and planned research and development programs.

Priority Analysis of Rehabilitation Strategies (PARS), a project aimed at developing priority and financial planning methods for rehabilitation and maintenance of Ontario's highway system, and various alternative methods, their relative performances and economic implications are under investigation.

The OPAC pavement design system is being upgraded.

Research to produce predictive relationships is exemplified by the Ontario Freight Model, an examination of why, what and how commodities move in the province.

Other studies include identifying rehabilitation strategies for Toronto's Highway 401 Bypass; studying the effectiveness of recycling old highway pavements; analyzing present highway design standards; and developing measures of highway service.

Metric Office

The Metric Office provides assistance and advice to all areas of the Ministry on the development and implementation of their metric conversion plans.

The office also functions as a clearing house for technical information on metric conversion.

In addition, the Metric Office provides metric resources materials and develops metric awareness programs and training aids. Research reports and other documents are screened to ensure metric accuracy during the conversion period.

The Ministry's major conversion effort is directed towards highways. Conversion is proceeding according to a National Plan (Sector 05.06 — Road Design, Construction and Operations) developed by federal, provincial and municipal governments working through the Roads and Transportation Association of Canada and approved by Metric Commission Canada.

SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

The responsibility of this branch is to provide systems research, development and implementation in new areas of transportation technology, improved methods of operation and operational standards.

The branch consists of the following program areas: transit systems; automotive vehicle energy management; transportation systems management and control; commercial vehicle operations and safety; human, social and economics research; highway wayside equipment research; and acoustics research.

Transportation Systems Management and Control

Studies are carried out in this office to optimize traffic flow by developing efficient traffic control systems and develop command and control systems for rail transit vehicles.

Computer systems analysis was provided and software developed for a computerized traffic surveillance and control system installed along Toronto's Queen Elizabeth Way (QEW). A ramp metering system, it features a centralized computer which controls the entry of vehicles onto the QEW, an automatic incident detection

system and closed circuit television for monitoring traffic flow.

The feasibility of applying similar traffic control techniques along Toronto's Highway 401 Bypass are now being investigated.

Research engineers are also determining the feasibility of a centralized computer traffic control concept for use by smaller Ontario municipalities.

Human, Social and Economics Research

This office conducts highway safety studies, investigates the impact of transportation systems on public attitudes and life styles and develops education programs.

In highway safety studies, researchers investigate various human elements of driver/vehicle safety such as seat belt usage and the effects of alcohol on driving, and develop education programs to achieve acceptance and implementation of safe driving practices by the driving public.

The seat belt program consisted of an evaluation of the effectiveness of the legislation. Roadside surveys monitored seat belt usage and telephone surveys monitored changes in attitude.

The reduction of speed limits and its effectiveness as a conservation measure was another evaluative project. The effectiveness of speed limit reduction as a safety countermeasure is being examined.

In the drinking-driving program a pilot study was carried out with students in Grades 7 through 13. Attitudes and knowledge relating to driving and drinking-driving were obtained.

Several studies assessed the impact of transportation system changes. This included a survey of the attitudes of industrial firms towards the proposed extension of Highway 400; public attitudes towards ramp metering on the QEW in Mississauga; the first phase of a study of public reaction to energy efficient high pressure sodium street lights; and the first phase of a study of public reaction to noise barriers to be erected in Ottawa and Toronto.

Research continued into ways to improve public acceptance of transit. This included a survey of marketing practices by Ontario urban transit systems, and household surveys in five

cities to evaluate readability of transit maps.

A major technical, environmental and economic feasibility study of recycling used motor oil was completed.

Commercial Vehicle Operations and Safety Programs

This office conducts research to investigate the operation and safety of articulated vehicles (hitched or trailer/vehicle combinations).

An analysis of data covering some 14,000 accidents showed that one quarter were directly related to vehicle instability and mechanical deficiencies. Field testing of a fully-instrumented articulated vehicle under normal and emergency conditions is therefore aimed at a thorough analysis of vehicle dynamics and mechanics to determine how a vehicle, its configuration and components relate to safe operation on the highway.

Similar testing and analysis is underway to evaluate the effectiveness of various anti-jackknife devices. Full-scale field testing and computer simulation will be used to identify which devices can prevent vehicles from jackknifing and determine their effect on the overall safety and operation of commercial vehicles.

The findings will support the development of safety regulations and commercial vehicle inspection procedures, as well as provide guidelines for safe vehicle configuration for Ontario's trucking industry.

Highway Wayside Equipment Research

Research to develop better equipment for improved highway and roadside safety is undertaken by this office.

Research engineers develop and test protective devices for highway maintenance; develop improvements to the hardware of existing three-cable guideways; develop, design and evaluate tools for lighting systems; and develop and test improved systems of guiderails, sign supports, lighting standards and impact attenuation devices.

Crash cushions that can be towed by or attached to Ministry maintenance sign trucks are being developed.

A computer systems program is also being developed for the design and evaluation of fixed highway lighting systems.

Automotive Vehicle Energy Management

Automotive Vehicle Energy Management undertakes projects aimed at the conservation of energy in automotive use, and co-ordinates the Ontario Government's efforts in this area in conjunction with the Ministry of Energy.

Research engineers are presently carrying out technical investigations in two main directions: alternative fuels to augment fuel supplies; and fuel economy measures to reduce the rate of consumption of available petroleum fuels and the consequent outflow of capital from Ontario.

These studies will be used to supply information regarding effective conservation measures to the Ontario public, vehicle fleet operators and government bodies within and outside the province.

Acoustics Research

This office studies transportation noise problems, undertaking research into how sound and vibration are generated and propagated in order to develop ways of diminishing them.

Noise barriers erected to reduce noise levels on properties along expressways have shown limited success. To investigate their effectiveness without the expense of constructing full-size barriers, acoustics researchers are utilizing a model facility to determine how the landscape and various barrier designs affect noise. Results will provide a basis for improved prediction of barrier performance and lead to better design and proper placement of efficient, effective noise barriers.

Other acoustics research includes psychoacoustics studies to determine which traffic noise characteristics people find objectionable, concentrating on the effect of fluctuations in sound levels. Also planned are experiments to test a method of cancelling sound from vehicle exhaust systems.

Transit Systems Research and Development

Mechanical engineering projects continued on railway noise and truck dynamics. Work is proceeding on a Wheel/Rail interaction simulator specification. Further research on rail dynamics and the dynamic analysis for the TTC rail vehicle trucks was completed.

Transit infrastructure activities for the year include completion of a study of an elevated guideway concept, continuation of a study of transit vehicle curving and participation in Bridge Code preparation.

On the electrical side, a propulsion system design rationale study neared completion. Though originally developed for rail transit systems, this basic methodology was also used to examine the technical considerations and difficulties in developing a satisfactory electric automobile. In addition an extensive survey was made on the availability and present characteristics of electric vehicles.

An analysis of service failure data from the Toronto Transit Commission has been completed and measures of reliability for the various types of transit vehicles (subways, street cars and buses) have been calculated. A report has been prepared.

An Energy Management Program for electric rail transit systems was also completed.

During the year, work on simulation models for fixed guideway transit systems operation was completed and new studies were undertaken on bus operations. Development work started on a transit demand model for short term planning of transit operations. Paratransit studies were done on the opportunities for low cost low capacity transit such as shared ride taxis and of the success of car and van pool schemes in North America and their applicability in Ontario.

Management, Information and Testing Systems

This office has developed a project management system that provides division management with a more effective means of monitoring and evaluating its projects and programs, and continues to maintain a state-of-the-art knowledge of the computer software and hardware development to ensure that the division has these facilities available for its needs in the most economical way.

Technical Information and Knowledge Acquisition Systems

This group ensures significant and current knowledge is at the disposal of the division. It provides administrative and organizational support on all aspects of information management.

A major area of attention during the year was the planning, development and implementation of an internal information system. External research data is retrieved through the TRISNET computerized information system.

Emphasis is presently being placed on initiating an inventory of technical reports, papers and related subject matter for general use within the division.

Testing Facilities and Equipment Management

This group ensures that all specialized testing needs are met, specifically test sites, specialized test equipment, motor vehicles, and other equipment such as dynamometers, etc.

During the year emphasis was placed on establishing a research and testing facility at Huron Industrial Park, Centralia, Ontario. A fully irrigated, low friction surfaced skid pad was constructed to undertake an evaluation of anti-jackknife devices. This program is now in progress.

Testing and Instrumentation

This laboratory acts in a support role to the various project groups in the division and provides instrumentation together with technicians to install and operate the instruments for experimental programs.

Engineering support is also made available to assist in planning test programs, conducting tests and reporting results.

The major projects presently using the assistance of the laboratory are:

- Bridge testing.
- Articulated vehicle research.
- Truck and bridge vibration investigation.
- Design and installation of a vehicle chassis dynamometer facility.
- Noise and vibration characteristics of subway wheels.
- Noise measuring and analyzing projects in the areas of environmental studies, and noise barrier assessment.

Computer Management Systems

This group ensures that the division has available computer software and hardware capability as needed in the most economical way.

During the course of the year arrangements for staff training, computer use, programming requirements, and terminal placement and removal were handled by this group. Project needs are reviewed with each program manager to ensure that money for computer requirements is available in the budget and to ensure that things run smoothly in the computer management area.

Project Management Systems

The aims of this group are to set up divisional systems which will allow the division to know how projects and programs are progressing and to monitor the progress and evaluate the merits of these projects so that the best are introduced into the Ministry's operational and administrative areas.

Technical Publishing

The divisional requirements for technical editing, graphic design and publishing are provided by this group. Major projects included the french version of "The Human Collision" and "Tunnelling Technology".

A metric training package was developed consisting of a handy metric reference card and a set of exercises to accompany a 45-minute film, "As the World Turns Metric". Activity on the film consisted of scripting and production assistance to the Public and Safety Information Branch. The training package will be used throughout the Ontario Public Service and will be distributed nationally by the Government of Canada and the National Film Board.

OPERATIONS

HIGHWAY ENGINEERING DIVISION

During the year, the former Design Division and Operations Division were replaced by the Highway Engineering Division which is responsible for the development of engineering and surveys policies, procedures, and standards, and for certain design functions in the fields of design, construction, maintenance including traffic engineering, engineering materials, structures, and surveys. The Division consists of two Branches, Design and Construction and Maintenance, and three offices, Engineering Materials, Structural and Surveys and Plans.

Engineering Materials Office

This office is responsible for the development of effective methods, of using various engineering materials in highway construction and maintenance, and for means of ensuring the quality of such materials as they are incorporated into the various works created by the Ministry.

Materials and Laboratory Services Section

This section is mainly concerned with the testing, inspection and evaluation of some 600 materials and products related to soils, aggregates, asphalt, concrete, metals and chemicals and also products purchased for general operational purposes.

During the course of the year, a number of processes and required staff complement were decentralized to the Ministry's regional offices.

Work commenced, continued or was completed on the evaluation of items such as:

- Reflectorized licence plates.
- Replacement of conventional materials by waste products.
- RAM (Rapid Analyses Machine) used to quickly determine the cement content of freshly placed concrete.
- Fast drying traffic paint.

Pavement Design and Management Section

The Pavement Design and Management Section produced 102 aggregate source lists for highway contracts, reviewed 26 official plans regarding aggregate resources policies as they affect this Ministry, prepared 10 county aggregate studies, monitored 116 soils design reports and profiles and processed 22 pavement selection reports.

Several specific projects were undertaken including performance of subdrains and sub-drain material, flexible perforated pipe installation to remedy the distress in concrete pavements, and shale fill construction practices. The on-line Pavement Management, Feedback and Information System was extended to all regions. This system is the only one of its kind in Canada.

Soil Mechanics Section

The section produced 120 foundation reports for planning and design of highway routes, bridges, retaining walls, culverts, sewers and earth works. Over 100 preliminary and finalized structural designs were reviewed. In addition, 46 foundation contract documents, consisting of 94 separate structure projects, were prepared for tender. Detailed studies were carried out of problems encountered during construction of an embankment on soft clay and

a concrete box culvert and retaining wall. A novel analytical approach to compute earth pressures was developed. Instruments were purchased to investigate performance of rockfill embankments.

Hydrology Section

The Hydrology Section again experienced an exceptionally busy year, particularly in the policy development area, and in the drafting of the hydraulic design section of the proposed Ontario Highway Bridge Design Code.

To improve co-ordination between drainage and hydrology, the Hydrology Section was transferred to the Highway Design Office at the end of the fiscal year.

Altogether, 34 hydrologic investigations were carried out during the year, with 39 reviews of municipal designs, and monitoring of 27 reports prepared by the regions.

Structural Office

The Structural Office completed the design and contract documents for 58 bridges in-house, and provided supervision for 31 bridges designed by consultants, for a total of 89 bridges for the year. Plans and contract documents were also prepared for 24 special design culverts, 25 sign support structures, and 12 buildings.

The Municipal Section approved plans submitted by municipalities for 114 preliminary structures, 178 final bridges, 138 culverts and 45 miscellaneous items. Inspections were carried out on 285 existing municipal structures and 95 load limit by-laws were reviewed. The Municipal Bridge Program continued with appraisals and inventorying of municipal bridges under way.

Work on the Ontario Highway Bridge Code continued throughout the year, with first drafts from the 17 committees submitted in March 1977.

Surveys and Plans Office

This office develops policies and procedures for engineering surveys and legal surveys, plan preparation and registration, cartography, photogrammetry and remote sensing. During the year, 1,311 plans were examined by this office. In addition, 145.78 miles of highway

were designated as controlled access highways, bringing the total mileage of such highways to 3,581.42 miles.

Work proceeded on the new 1977 metric Official Road Map of Ontario which nears completion. The South Central Ontario Transit Map made on behalf of the Toronto Area Transit Operating Authority (unreleased) and 8 county and township maps were completed. A variety of cartographic services were provided to the Ministry and other government agencies.

Photogrammetry Section completed 98 plans at various scales and digitized 31,760 acres of large scale coverage, 53,510 acres of medium and small scale coverage, and 24 miles of cross-sections. Also, 11 oblique photographic projects and 12 non-mapping vertical photographic projects were flown.

The Remote Sensing Section continued the study on 16 environmental parameters for a 46 sq. mi. test site along Highway 402 as part of a project entitled "The Surveillance and Prediction by Remote Sensing of the Environmental Effects of a New Highway Facility". Investigations were undertaken on the deicing bubble systems, pavement distress features and the stability of Rous Lake gravel pit. The section provided aerial photographic mosaics and Image Library Services to the Ministry. A total of 7,168 sq. ft. of mosaic were compiled and 1,084 requests were processed respectively.

Surveys Section evaluated an additional 800 horizontal control survey monuments on the Ontario Co-ordinate System and also established 375 precise bench marks.

DESIGN AND CONSTRUCTION BRANCH

During the 1976-77 fiscal year, this branch was responsible for administration of the construction program in the southwestern, central, eastern and northwestern regions. With the advent of decentralization, the program in the northern region was administered by the Regional Director. The branch produced and revised contract documents and specifications, provided technical guidance and general supervision on quality control, approved contractors' shop and falsework drawings, controlled construction staff and administered the construction technical training program.

Following are a few of the many projects undertaken:

Southwestern Region — Chatham, London, Stratford and Owen Sound Districts

Grading, drainage, granular base, hot mix paving and a structure were completed on the Windsor-Central Avenue extension, from 0.06 miles north of E.C. Row Blvd. northerly to Gran Marais Road intersection. On Hwy. 40 (new), grading, drainage and two drain structures, from 0.4 miles south of County Road 2 (Township of Sombra) southerly to the existing Hwy. 40, a distance of 8.2 miles was completed.

The grading, drainage, granular base and hot mix paving on Hwy. 3 from 0.15 miles west of Aylmer east limits easterly 4.9 miles was completed.

The 5.8 miles of hot mix paving from Harriston west limits to Main Street in the Town of Clifford was completed.

Grading, drainage, granular base and hot mix paving was completed at the following locations on Hwys. 11 and 11B: from 0.6 miles south of Hwy. 93 northerly to the north junction of Hwy. 12 at Orillia; from Hwy. 12 southerly to Hwy. 11 at Forest Home with intersection improvements at Hwy. 12 and 12B. Also, the grading, drainage, granular base, hot mix paving and Willow Creek Bridge Structure on Hwy. 26 from 0.1 miles west of Midhurst Corners westerly 12.2 miles has been completed.

Central Region — Hamilton, Toronto and Port Hope Districts

At Stoney Creek on Hwy. 20 and the QEW, the grading, drainage, granular base, concrete base, hot mix paving, structures, lighting and security fence required for this interchange complex has been completed. Also on the QEW, the McLeod Road interchange and east and west Service Road in that area have been completed. This work consisted of grading, drainage, granular base, hot mix paving and structure.

Hwy. 401 from 0.23 miles west of Dixie Road westerly 3.62 miles was completed. This work consisted of grading, drainage, granular base, hot mix paving and structures. On Hwys. 48 and 12, a grading, drainage, granular base, hot mix paving and bridge deck waterproofing

contract was completed. It included work on Hwy. 48 from the north junction of Hwy. 12 easterly 6.46 miles to Hwy. 46 and on Hwy. 12 from Hwy. 48B northerly 1.70 miles to the Trent Canal Bridge.

The grading, drainage, granular base, hot mix paving and structure was completed on Hwy. 7 from west of Omemee east limits easterly 5.37 miles. On Hwy. 507 from Hwy. 36 southerly through Buckhorn 1.51 miles, including the Trent Canal Bridge and the Lower Buckhorn Lake Bridge, the grading, drainage, granular base, hot mix paving and structures were completed.

Eastern Region — Kingston, Ottawa and Bancroft Districts

Grading, drainage, granular base, hot mix paving on Hwy. 2 from Brockville east limits easterly to 1.17 miles east of Maitland east limits was completed.

On Hwy. 29, from Pakenham south limits northerly to 1.1 miles south of Hwy 17, 7.54 miles of hot mix paving has been completed. The work of grading, drainage and structure on Hwy. 417 from 4.5 miles west of Former Cty Rd. 9 westerly to Hwy. 44 including the connection to Hwy. 7 has been completed.

A distance of 16.32 miles of hot mix paving has been completed on Hwy. 127 from Lake St. Peter northerly to the Junction of Hwy. 60.

Northwestern Region — Sault Ste. Marie, Thunder Bay and Kenora Districts

Grading, drainage, granular base and hot mix paving was completed for passing and truck climbing lanes on Hwy. 17 from Hwy. 108 westerly to Iron Bridge at various locations. In addition, 10.12 miles of grading, drainage, granular base and hot mix paving on Hwy. 129 from Hwy. 554 northerly has been completed.

Grading, drainage, and three structures on Hwy. 102, 2.0 miles east of Siston's Corners easterly 1.21 miles, and work at the Dawson Patrol Yard has been completed. Grading, drainage, granular base, hot mix paving and patching has been completed from 0.6 miles west of Hwy. 102 easterly to Kakabeka Falls.

Grading, drainage, granular base and hot mix paving on Hwy. 17 has been completed. This work involved completion of various truck climbing lanes from Hwy. 647 to Hwy. 71, including the erection of a truck inspection station at Vermilion Bay.

Quality Assurance Office

This office provided specialized service in all aspects of quality assurance of bituminous, concrete, soils and granular construction to the regional offices, and continued evaluation of new techniques in construction.

Some highlights of non-routine work carried out are:

- Before and after construction road roughness readings over 6,254 miles.
- Continued evaluation of drum mix asphalt plants. Report to be published in 1977.
- Continued investigation of problems associated with hot mix storage bins.
- Continued development of a computer information management system to provide more effective concrete quality assurance.
- Developed a technique of vacuum assisted epoxy injection to repair damaged concrete structures.
- Initiated and supervised an operation in controlled wall blasting of rock cuts in Sudbury.
- Consulted and made recommendations in the use of filter fabric and corrugated plastic pipe in the areas of soils erosion and environmental protection.

MAINTENANCE BRANCH

The branch, with the exception of the King's Highways and Secondary Highways in the northern region territory, controlled the winter and summer maintenance activities throughout the province. This transfer of control to the northern region territory is in conjunction with the Ministry's decentralization program. The initial steps were started to transfer this control to the other four Ministry regions.

Roads snowplowed during the winter months totalled 15,291 miles. Salt used for deicing roads totalled 485,552 tons and sand used for winter maintenance amounted to 996,653 tons.

Mulch pavement mixed and laid by Ministry forces totalled 40 miles.

A total of 20 zone stripers painted 12,327 miles of King's and Secondary Highways plus an additional 6,273 miles of edge line. Because of the successful operation of the first striper converted in 1975 to the use of fast-dry traffic paint, it was decided all future zone stripers built by the Equipment Office would be designed to apply this paint. During the past year,

three new stripers such as these were built and one each sent to Hamilton, Toronto and Ottawa Districts. Expansion of edge lines on Ontario highways was accomplished in an attempt to reduce pavement edge shoulder maintenance.

In addition to expanding the use of fast-dry paint in our zone striper fleet, we began to convert the special pavement marking units to the use this paint. These hand units are used for painting stop blocks, cross-hatching, lane arrows, etc. Again because of its fast-drying quality, the use of this paint speeds up the operation and increases production. Most of the districts in Southern Ontario were converted in 1976 and the plan is to continue this conversion program next year.

During the latter part of the year, Ministry sign shops became involved in preparing for the conversion of highway signs to metric units in 1977. In most cases, the numerals on existing signs will be changed in the field by applying overlays, which were previously prepared in the sign shops, bearing the equivalent metric units. In other cases, new signs showing metric units were manufactured for direct replacements in the field. By the end of the year, approximately 75% of all required signs and overlays had been manufactured and stockpiled for completion of this program in 1977.

Northern Region, following an initial study by H.O. Maintenance Branch and completed by the region, designated New Liskeard and North Bay as manufacturing shops for the region. This is in line with the Ministry's concept of centralized manufacturing. Studies also proceeded in joint co-operation between H.O. Maintenance Branch and the remaining four regions with the view of centralizing the manufacturing in those regions.

Landscape Planning and Operations Section

Some 170,114 trees, shrubs and seedlings were planted throughout 17 districts. Included in landscape development was the planting of the Highway 417 link to the Ottawa Queensway which required 5,500 units of plant material. Herbicide applications of weed and brush control were carried out over 42,500 acres of right-of-way by all 18 districts. New construction projects required soil stabilization treatment over approximately 3,290 acres. A total of 9,406 dangerous and hazardous trees were removed by maintenance. The Landscape Planning group was involved in some 91 projects

involving activities at preliminary and detail design stages as well as route planning studies.

Electrical Section

Traffic signals at 125 locations were designed by this section and installed by the district electrical crews.

Highway illumination at 181 locations, flashing beacons at 55 locations and sign lighting at 55 locations were installed.

Electrical work was done in the wiring of buildings, field offices, patrol yards, and special lighting projects at 200 locations. Miscellaneous electrical work involving heating systems, pumps, furnaces, oil and gas fired, was carried out at 148 locations.

Plans were finalized for the transfer of some staff and the bulk of traffic Signal Design to the Electrical Design Section of the Design and Construction Branch.

Structural Maintenance Section

Approximately 1,550 structures were inspected during the year including special investigations of damaged and all steel haunched girders structures being suspect of weld deficiencies.

A number of girders of these structures were examined by x-ray equipment. Three structures of this type were reinforced, where deficient welds were detected.

Design and supervision of major repair work was carried out at the Gull River Bridge, Highway 35 near Minden where a steel beam failure had occurred.

The Inspector 50 vehicle was used extensively throughout the year providing access under structures requiring close inspections or repair.

Repairs were made to all structures on the extension of Highway 556 (formerly Ranger Lake Road) including the installation of the Province's longest single span bailey bridge over the Mississagi River. Field assistance on these and several other complicated projects was provided.

The Structural Maintenance Section assisted several districts in the preparation of the Annual Structural Maintenance Programs and

prepared plans for bailey bridges, bridge deck expansion joints and structure repairs.

Plans were finalized to transfer this section with staff and duties to the Structural Office of the Highway Engineering Division.

Equipment Engineering Office

This office was responsible for the monitoring and developing of equipment maintenance and repair policies, the co-ordination and financing of equipment replacement, and the maintenance of Head Office and Central Region Fleet.

The major accomplishment of the past year was the re-writing of the Equipment Manual, which is to be issued and distributed in June, 1977.

The New-Equipment Section supervised equipment replacements, having processed and acquisitioned 381 vehicles, and 953 units of other equipment, for a total value of \$4,800,000.00. A library of approximately 600 specifications was maintained up-to-date, 199 new specifications were produced for M.T.C., and 28 for the Ministry of Natural Resources. The Design and Machine Shop sub-section designed and manufactured two hot paint zone strippers, two weed sprayers, a sign washing machine, crash box attachments, etc. This group participated in the modifications to the Kingston to Wolfe Island bubbling system.

The Equipment Garage maintained and serviced a fleet of approximately 212 vehicles and 200 units of other equipment, supplemented by rented trucks (approximately five at a time), used by Head Office and Central Region. The New-Equipment Shop processed and distributed approximately 1,200 units of equipment.

The Fleet Management Section developed, monitored and co-ordinated fleet maintenance procedures, by utilizing data processing print-outs. The Training group organized 35 schools of two-days duration. Two seminars for senior staff were organized.

The Recording and Administration Section completed several studies including garage staff requirements for each district, rental rates both internal and external, garage labour rates, and fuel consumption.

Sign and Building Permits Section

Building permits issued during the year by the Sign and Building Permits Section totalled 5,153 with a valuation of \$533,035,565. Permits for Field Advertising Signs totalled 6,537, with a valuation of \$75,768.

Other permits issued included 2,995 Entrance Permits; 1,251 Encroachment Permits; and 8,503 New Sign Permits and Re-issued Sign Permits.

Traffic Engineering Office

This office is responsible for setting policy and procedures applicable to traffic control devices and also provides a variety of services to other branches and offices, in relation to data collection, subsidy approvals, sign designs and improved systems design operational warrants.

The Traffic Analysis Section completed six urban traffic operational studies, brought one additional study to the draft report stage and initiated a further three studies.

The manual of Uniform Traffic Control Devices, Ontario, Metric Edition, was completed and issued to all municipalities. Plans for the upcoming conversion of traffic signs to metric units were finalized and all road authorities were informed in order to have a smooth transition.

New symbols for accommodation, travel information and push buttons for traffic signals were developed and introduced.

Over 110,000 roadside interviews were conducted in a number of locations across the province.

The Traffic Information Systems Development Section is continuing its part, as a member of the project team, in developing a new Accident Information System, which will reflect both the new Accident Report format and the new Metric Reference System. Modifications to the existing system have, in the meantime, been developed so that more flexible retrievals are possible. Over 400 requests for accident information were handled by this section during the year.

In the devices area, the need for illumination in 134 projects was reviewed by the Traffic Devices Section. New traffic signal installations or revisions to the existing signal installations were approved at 85 locations on the King's Highway system, and 687 locations on municipal roads. Staff continued participating in computer based traffic signal studies in three cities.

The Traffic Control Development Section completed six projects in the area of developing and evaluating new devices and techniques for operational improvement of highways.

The Freeway Surveillance and Control System continued to operate on a portion of the Queen Elizabeth Way through the City of Mississauga. Continued improvements in traffic flow were evident. A centralized control system was brought into operation during the year to provide co-ordination of the various components. The central control system also permits more rapid detection of accidents or unusual conditions on the freeway.

DRIVERS AND VEHICLES

TRANSPORTATION AND REGULATION DIVISION

The Transportation and Regulation Division is comprised of the Licensing and Control Branch and the Program Development Branch.

LICENSING AND CONTROL BRANCH

Driver Licensing and Control Office

The licensing and post-licensing of drivers comes under the jurisdiction of this office. The day to day functions also include the maintenance and administration of the Demerit Point System; the maintenance of all drivers records; administration of license suspensions; the reinstatement of driving privileges; and the review of all drivers known to have medical or physical conditions.

	1976	
Licensed Drivers		4,135,925
New Drivers	266,351	
Male	2,597,496	
Female	1,718,429	
Demerit Point System		
Warning at 6 to 8 point level	113,266	
Interview at 9 to 14 point level	27,129	
Suspensions at 15 or more point level	6,600	
Suspensions for 30 days	5,674	
Suspensions for 6 months	926	
Suspensions for physical or medical reasons	1,556	
Suspensions for drinking and driving	42,621	

Vehicle Licensing and Control Office

A major responsibility of this office is the licensing of the province's 4.8 million vehicles and the provision of relevant licensing information for the purpose of law enforcement.

Licensing service was provided to the public throughout Ontario by 11 Ministry offices and 299 appointed license-issuing agents.

An automated system handles the 3.6 million passenger and half-million trailer registrations. Other records are maintained manually for commercial motor vehicles, buses, motorcycles, mopeds, and motorized snow vehicles.

The licensing of public commercial vehicles and public vehicle operations is also administered by this office.

PROGRAM DEVELOPMENT BRANCH

The Program Development Branch has the responsibility for providing the primary staff resource to the Drivers and Vehicles area of the Ministry in the assessment of transportation regulation of programs and in the development of new policies and programs for that area.

The branch is comprised of four offices: Project Planning Office; Program Support Office; Vehicle Standards Office; and Drivers Standards Office.

Project Planning Office

The Project Planning Office is an integral part of the Program Development Branch. It reacts to requests and demands for new policies and laws in the area of Driver and Vehicle Administration. It does so by assessing

ideas, recommending priorities, developing thoroughly researched positions, and by guiding feasible proposals through the various stages of approval. The office establishes the economic and social consequences of a particular change, the enforceability of proposed new laws and the effects that a proposal will have on highway safety.

All policy proposals weigh the benefits against both the internal and external costs incurred by implementation of the proposals.

In considering these factors, the office establishes and maintains effective communication links with the public and industries most directly affected by ongoing or proposed regulatory laws. The office is to maximize its credibility and that of its proposals within and without government and the policy development process in transportation is to be made as transparent as possible.

The office will assist the Ministry to maintain effective links with other governments and administrative associations. It will, in the next year, place a high priority in the continued development of public carrier policy in Ontario, easing the movement of goods between jurisdictions and improving highway safety.

Driver Standards Office

The Driver Standards Office functions within the Program Development Branch to ensure the continued improvement of the effectiveness and efficiency of Ministry activities on driving standards.

It also ensures the validity of evaluation measures used in monitoring sub-program activities and is responsible for identifying and formulating development needs.

In addition, the office participates with other branch offices in the design and implementation of development projects and provides a liaison service for the Transportation Regulation Division with the Research and Development Division and, as necessary, with outside research and development resources.

Program Planning and Evaluation Office

This new office provides information to management for policy decisions and measuring program effectiveness and efficiency. The office will plan and co-ordinate the effective development of the transportation regulation programs,

and direct the implementation and evaluation of these programs.

Vehicle Standards Office

The Vehicle Standards Office participates in the development of vehicle-related safety standards, legislation and regulations; provides engineering expertise internally and externally in matters relating to vehicle design, safety standards and government control; manages the vehicle equipment approval program; investigates vehicle accidents in which vehicle condition may have been a contributory factor and recommends appropriate government action.

REGIONAL OPERATIONS DIVISION

This division is divided into 13 districts contained within five regions: Northwestern Region (Thunder Bay); Southwestern Region (London); Northern Region (North Bay); Eastern Region (Kingston); and Central Region (Toronto).

The responsibility for field operations throughout the province in the areas of driver examination, vehicle inspection, and enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act, and The Motor Vehicle Transport Act (Canada), including investigation and prosecution of illegal trucking operations in the province, is administered by this division.

Driver Examination

A total of 476,329 inside pre-examinations were conducted at 165 driver testing facilities throughout the province, and 309,588 road tests were conducted by a staff of 229 driver examiners.

During the summer months of July and August, 50 high school driving instruction teachers were employed as driver examiners. During 1976, Ontario recruited additional female driver examiners, bringing the total to 12 female driver examiners working in various driver examination offices across the province.

Vehicle Inspection

A staff of 114 vehicle inspectors administer four programs designed to reduce death, injury and property damage caused by defective vehicles.

The 20,253 inspection mechanics registered under licences of 8,404 appointed inspection stations are permitted to complete safety standards certificates. A total of 984,797 certificates were filed in 1976.

The inspection of safety-related vehicle components or systems on heavy commercial motor vehicles is carried out at roadside inspection sites across Ontario. MTC truck inspection stations are most frequently used. A total of 40,996 inspections were carried out in 1976, and 5,193 vehicles were detained until hazardous defects were corrected.

Statistics derived from the inspections carried out on heavy commercial motor vehicles proved conclusively that dump vehicles, as a class, had the highest defect rates in all major safety-related systems. Therefore, effective September 1, 1976, all laden dump trucks, highway sanders and truck-tractors hauling dump trailers were required to undergo twice-yearly prescribed inspections. This is expected to involve some 35,000 vehicles.

During the year, 36,873 vehicles were inspected at the vehicle inspection lanes at Downsview and 40,731 vehicles were inspected by portable inspection lanes travelling throughout the province during the summer months. The inspection lanes identified 6,846 vehicles having defects so serious in nature as to make further operation impossible until repairs were made.

In the semi-annual inspection of school buses some 20,000 inspections were made across the province.

Highway Carrier

The regulation of for-hire trucks and buses, and the enforcement of the provincial weight laws are the responsibility of the 179 highway carrier officers. A total of 46 truck inspection stations are operated throughout the province, which in turn are supplemented by mobile patrols in designated areas. As a result, some 2,847,440 vehicle inspections were carried out.

Driver Improvement Counselling

A staff of 16 counsellors conducted 27,129 interviews with Ontario drivers reaching the nine point level under the Demerit Point System.

Vehicle Registration

Ministry licence-issuing offices provide registration service for motor vehicles, and other driver and vehicle services such as the issuance of duplicate licences and permits.

In early December 1976, five additional offices were opened in London, North Bay, Kingston, Thunder Bay and Toronto, bringing the provincial total to 11.

Investigations and Prosecutions Office

The Investigations and Prosecutions Office was established in September 1974 to co-ordinate enforcement activities and ensure uniform enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, and Motor Vehicle Transport Act (Canada) and to conduct investigations of an in-depth nature as provided by Section 15 of The Public Commercial Vehicles Act.

During the past two years, in-depth investigation, requiring examination of all books, records and documents have become the rule rather than the exception. Numerous investigations have been conducted by this office into the operations of unlicensed truckers providing for-hire service under the guise of a lease arrangement.

More recently, there has been increased activity in examination of licensed carriers' books, records and documents to establish if the operation is complying with the terms and conditions of their transport authority. In the case of non-compliance, an investigation report, together with supporting documentation, is filed with the Ontario Highway Transport Board.

As a result of these in-depth investigations, there are currently 1,100 cases before the courts for contravention of The Public Commercial Vehicles Act and/or The Motor Vehicle Transport Act (Canada). Approximately one-third involves purported leasing arrangements. Subsequent to registered convictions establishing a pattern of illegal operations, the Registrar of Motor Vehicles has exercised his powers under Section 27 of The Highway Traffic Act and issued some 39 notices of cancellation of plates and permits.

In addition, 147 reports have been submitted to the Ontario Highway Transport Board respecting the operations of licensed carriers in contravention of their authority.

Staff Safety Office

This office is responsible for devising policies, programs and safe practices designed to protect the 11,000 MTC employees from work-related accidents and injuries, and accidents involving MTC motorized equipment.

Altogether, 2,304 employees completed an eight-hour course in defensive driving, 1,840

equipment operators and 464 non-professional drivers.

There were 1,586 equipment operators awarded Safe Driving Awards in 1976 including 43 who achieved the 20-year milestone award.

First aid certification was obtained by 404 employees in 1976 through St. John Ambulance. In future, this instruction will be provided by qualified MTC personnel.

FINANCE AND ADMINISTRATION

EXTERNAL RELATIONS DIVISION

Insurance and Claims Section

The Insurance and Claims Section of the Ministry is charged with the responsibility of dealing with a very large volume of claims filed by the public against the Ministry.

The handling of such claims entails obtaining detailed reports from regional and district offices, from the police, where applicable, and field investigations where necessary.

With regard to accidents involving Provincial Government vehicles, the Insurance and Claims Section handles these matters not only for this Ministry but also for the whole Provincial Government with the exception of the Ontario Provincial Police.

The Insurance and Claims Section institutes claims against the public for damage to Crown property such as bridges, light standards, guide rails etc., and, where necessary, arranges for legal action to be taken against responsible parties through the Ministry of the Attorney General.

The section handled approximately 18,000 claims of all types during the fiscal year.

Office of Legal Services

The Office of Legal Services is a law office within the Ministry which provides legal services to the Minister and Ministry staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to the Minis-

try. They are located at Downsview and at each of the regions.

The office provides legal advice on all aspects of the Ministry's programs and prepared the legal documentation through which such programs are carried out. The office advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes which the Ministry administers.

Legal office counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact and conducts prosecutions for offences under the Ministry's statutes.

SERVICES DIVISION

ENGINEERING AND MANAGEMENT SYSTEMS BRANCH

The function of this branch is twofold. One purpose is to co-ordinate the Ministry's system activities, funding, and to advise Ministry management on systems planning matters including staffing.

The second purpose is to provide program managers with expertise in automated and related non-automated systems and the acquisition, development and maintenance of automatic data processing services.

This branch acts as a clearing house for all computer program development, with the systems co-ordinators acting as catalysts by identifying system opportunities and advising program managers accordingly.

There are currently more than 100 computerized systems supporting various programs of the Ministry. All aspects of systems development and maintenance activities performed by the branch co-ordinators' offices include:

Systems Co-Ordinator's Offices Engineering and Research and Planning and Design

These offices are responsible for the metrication conversion of all types of engineering programs. Support was also given to the Communications Division in developing plant depreciation models in dealing with the Bell Telephone rate increase.

Systems Co-Ordinator's Office Driver and Vehicle

During the past year, a new Classified Driver Licensing System was developed and implemented. This new system complies with all of the new legislative requirements using modern computer technology. This new system complies with all of the new legislative requirements using modern computer technology. The on-line vehicle registration system has increased the scope of service to law enforcement and other judicial agencies.

Systems Co-Ordinator's Office Finance and Administration

This group has completed a feasibility study of the Operations Management System which will produce significant improvement at the regional and district financial and operational levels to respond to changing needs and conditions. All of the needs have been defined and documented, and preliminary design of the system is now under way. The acquisition of intelligent terminals to be used at the field level is in progress.

Production Services Office

This office is responsible for the provision of comprehensive support to all users of the Ministry with respect to data conversion, technical control, documentation and administrative support, computer services monitoring and graph plotting services for engineering applications. An IBM 370/168 computer system was installed to provide service to this Ministry by the Ministry of Government Services. Improved turnaround time including on-line enquiry has resulted.

The batch jobs processed on computer

averaged 8,000 to 9,000 jobs per month. Time sharing and on-line enquiries were expanded extensively.

SUPPLY AND SERVICES BRANCH

This branch is responsible for the development and monitoring of supply and services' policies and procedures for the Ministry. It is also responsible for the delivery of these services throughout head office, throughout the Ministry for some, and throughout the government for the purchase and disposal of motor vehicles. These services are provided through the following five offices.

Purchasing and Supply Office

The Purchasing Section — Materials and Operating Supplies — is responsible for the purchase of all construction and maintenance materials, and general supplies for the Ministry. Annual purchases total approximately \$50 million.

The Purchasing Section — Vehicles and Equipment — is responsible for the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government Ministries and agencies. Annual purchases total approximately \$20 million.

The Stores Section — the Ministry takes advantage of savings by bulk purchasing and facilitates the operational part of the Ministry by having materials available when required. They also recondition and store bailey bridge components for emergency use throughout the province. There are currently 220 such installations in the province for the Ministry, municipalities, or other agencies.

Special Services Office

The Special Services Office administers a capital building program involving provision of the Ministry's total major building and space requirements, including office furnishing and equipment in the head office, regional and district headquarters' complexes.

This office is also responsible for the provision of accommodation, telecommunication, and postal services within the Ministry and for the administration of Service Centres on controlled access highways.

During the past year, the New Liskeard District garage and office complex, the

Huntsville district Services building and the North Bay District Material storage yard have been developed and completed. Currently, an extension is being added to the Ottawa District garage.

A major accommodation alteration program, designed to consolidate all MTC head office administrative functions at the Downsview complex by relocation from Queen's Park and leased premises at Orfus Road, is currently in progress. The alteration program also has as its purpose the accommodation of division and branch operations into their recently restructured organizations.

Major telecommunications projects completed in the past year include multi-channel VHF/UHF/FM mobile radio systems for Huntsville and Bancroft Districts. These systems exhibit the most advanced state-of-the-art equipment and, through their multi-channel concept, are capable of handling any future increase in radio traffic volumes.

Current activities in the field of mobile radio systems include the preparation of radio specifications designed to procure radio systems for Sudbury and Port Hope Districts in the next fiscal year and preliminary path profile studies aimed at defining future new system requirements for North Bay and Chatham Districts.

In the program involving radio beacons at Ministry sponsored northern airstrips, new installations were made at Fort Albany and Pikangikum, a replacement beacon was installed at Attawapiskat and a higher power beacon was installed at Winisk.

Special Services Operations Section is responsible for all the Ministry's incoming and outgoing mail handling, Courier Mail Service to all regional and district offices, and Downsview Teletype Centre activities.

The Distribution Centre and Cancel Plateroom at Queen's Park are also important responsibilities of this section. They handle heavy volumes of stock, licence plates, permits, driver's licences and returned licence plates.

The following volumes of mail items, teletypes, orders and plate cancellations for 1976 shown below will illustrate the high level of activity by this section:

Outgoing Mail	2,014,869
Incoming Mail	3,445,280
Teletype Messages	913,459 (system total)

With respect to Service Centre administration and activities, exploratory negotiations were conducted during the past year with various oil companies to find mutually satisfactory methods of improving the Highway Service Centres. In late 1976, a formula was agreed upon which resulted in an amendment of the lease agreements with oil companies. It allowed them to deduct from their gross revenues relating to gasoline and diesel fuel sales, an amount representing the increase in federal taxes and producing province royalties since September, 1973.

The oil companies agreed to take advantage of the Ministry's offer and gasoline price reductions resulted at all Service Centres.

Graphic Services Office

The principal functions of the Graphic Services Office are to provide printing and duplicating services; a wide variety of high quality black and white and colour reproduction services using photographic, diazo, screen processing and xerox methods; and a commercial art and display service for the various Ministry programs.

Approximately 23,000,000 impressions were produced in our offset reproduction facility; 32,500 requests for reprographic services were processed, 500 requests for graphic art work were completed and our display unit participated in eight exhibitions and provided a float for parades and carnivals at various locations.

Record Services Office

This office administers a program of records management providing assistance to all Ministry organizations in the efficient handling of records and information. Under this program, Forms Management and Microfilm Services are centralized services used to improve the Ministry's record-keeping practices.

This office also provides a library service, now recognized as an authoritative source of information in the Ministry's fields of interest and responsibility. Publication services, including the printing, distribution and sale of Ministry maps and publications is another responsibility of this office. Revenue from the sale of county maps is in excess of \$36,000 annually.

General Services Office

Government Garage — The Government Garage is responsible for the maintenance of government-owned sedans operated by Cabinet Members and senior management at Queen's Park, as well as providing a limousine and chauffeur pool service.

Field Review and Disposal — The disposal of all used equipment and surplus material for the Ministry, as well as all motor vehicles for the Ontario Government, is done through the Field Review and Disposal Office. Disposal is by means of public auction or tender. Sales total about \$2,500,000 a year.

Tenders Office — This office promotes and maintains strict security over all tendering procedures, tenders in custody and all highly confidential matters relating to engineering and supply contracts.

Approximately 12,000 tenders were received and processed for 2,100 various contracts. Public attendance by contractors and suppliers numbered 2,300 at the tender openings.

In the advertising function, this office placed approximately 3,000 insertions on behalf of the Ministry on a province-wide basis. These advertisements were to call tenders on engineering and supply contracts, property sales, equipment sales and a variety of other notices.

The direct cash sales of Contract Documents, the Standard Specification Manual and the Ministry's "Contract Bulletin" to the contracting industry, produced an annual revenue of approximately \$33,000.

Instrument Repair Shop — All Ministry-owned survey equipment, traffic counters and allied equipment are repaired and tested at this facility.

Accounting and Asset Control — The main purpose of this section is the monitoring and administrative control of the Movable Asset Inventory Control Program for the Ministry. It is also responsible for the requisitioning of special equipment for the Ministry such as: microwave measuring units; tellurometers; geodometers; transits; levels and traffic recorders.

Supply and Services Planning — This office co-ordinates and provides an analytical and

cost planning function for the Supply and Services Branch.

PUBLIC AND SAFETY INFORMATION BRANCH

This branch writes, edits and distributes all aspects of information related to Ministry operations through the use of news releases, speeches, statements, media conferences, displays and films.

Transportation safety education and information programs are created, promoted and organized for all age groups. A new character was created this year, "Sam the Safety Duck", who will assist "Elmer" in educating school children with the many different safety rules. These safety education and information programs range from Nursery school and Kindergarten groups to Senior Citizens, all aimed at promoting public safety awareness.

The necessary expertise required for layout, editing, marketing and advertising is also provided to produce brochures, pamphlets, booklets and bulletins.

In addition, this branch is responsible for producing and scripting in-house television and radio spots, films, slide shows and audio-visual services; planning and co-ordinating exhibits and displays; planning and operating the "Safety Caravan" at fall fairs, winter carnivals and other public gatherings; arranging and organizing official functions and opening ceremonies; producing several periodical publications, including the MTC News, The Ontario Traffic Safety Bulletin and the Annual Report; providing the Ministry's road reporting service to the motoring public.

PROPERTY BRANCH

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions are developed by this office.

Using these policies and procedures, staff in five regional offices negotiated 1,659 amicable property settlements. The Ministry expropriated 377 properties to obtain title for land required to permit contracts to proceed.

The Ministry expended \$21,263,988 in payment of compensation in acquiring title to

lands required for highway projects. An additional \$2,169,336 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$3,824,284 from the sale of surplus lands and \$769,037 from leasing properties was received by the Ministry.

The formal training program was revised and now consists of two courses involving appraisals and negotiations to which both this Ministry and MGS participate. In all, 43 staff attended the Advanced Appraisal Course and 34 will attend the Principles of Right-of-Way Acquisition Course #101.

INTERNAL AUDIT BRANCH

This branch is responsible for the audit activities of the Ministry. Under general direction of the Deputy Minister, the branch is segregated into the following three areas of responsibility:

Operational Audit Office

This group is engaged in the expenditure, revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units, as well as some 300 private licence-issuing agents throughout the province.

The staff also performs audits in municipalities dealing with Ministry subsidized road and transit expenditures. This function extends to such agencies as the Toronto Area Transit Operating Authority, and the Ontario Northland Transportation Commission, including subsidiaries such as the Owen Sound Transportation Company Limited and Star Transfer Limited, as well as specific programs concerning expressways and connecting links.

Engineering Audit Office

The Engineering Audit Office, with complement in five regional offices and head office, audit all phases of the Ministry's capital construction program and Ministry subsidized contracts.

In 1976-77, some 700 interim and 480 final audits were performed to ensure proper progress and final payments on contracts. During the construction year, 1,800 weigh audits were completed on capital and subsidized contracts.

Claim audits were performed on 55 contracts and 32 special assignments were completed. Audits of 11 design projects and 45 negotiation reviews rounded out this office's activities.

Project and EDP Audit Office

As a part of this office's mandate, specialized audits were performed on items of a complex or contentious nature. Miscellaneous investigations and allegations were undertaken as directed.

Force account payment audits were performed involving records of some 15 contractors. Claim and negotiation audits were undertaken as requested by Engineering Claims Office and Design and Construction Branch.

Special audits were performed on consultant payroll burdens and incorporated into a full review of the purchase and management of Ministry consultant services.

Current commitments and involvements under special agreements are:

- Mining Access Roads.
- Remote Northern Ontario Telecommunications Systems.
- Urban Transportation Development Corporation.
- Several other projects under special agreement with major corporations.

Audits of Ministry electronic data processing systems were conducted to evaluate and determine effectiveness and efficiency of the systems. Assignments included Movable Asset Control, C.D. 1 accounts, Unclassified Payroll Systems, Driver and Vehicle Agents Issuing Systems, traffic program analysis and a review of terminal operations.

FINANCIAL BRANCH

The Financial Branch records, monitors and controls expenditures and revenues of the Ministry. It provides advisory assistance to management on financial matters and acts as the liaison between the Ministry and central agencies, other arms of government, and the public in the area of finance and accounting.

The branch is also responsible for the prequalification of contractors bidding on Ministry contracts and contracts for several of the larger urban municipalities.

It maintains a substantial statistical recording unit for the provision of statistical information concerning most subjects affecting the Ministry in quantities, dollar volume units and prices,

indices, and geographic locations. In addition, it provides the head office accounting for all MTC branches located at Downsview.

SPECIAL REPORTS

ONTARIO NORTHLAND TRANSPORTATION COMMISSION

The Ontario Northland Transportation Commission provides an efficient, diversified and economical means of transportation and communication best suited to the individual requirements of their customers and communities.

Telecommunication Services

The operating profit of over \$4 million was almost 11 percent higher than in 1975, and was largely due to the increased use of long distance which drew 16 per cent more revenue in 1976.

Much of the activity during the past year was focused on technical updating and expansion of the services. Work was well under way to bring Direct Distance Dialing to Cochrane and communities to the north and west of this centre early in 1977. A new microwave system north of Timmins, to be used in conjunction with the Direct Distance Dialing in this area, neared completion. Replacement of the main heavy route microwave system from North Bay to Timmins was begun in order to be ready for the expected increase in traffic during the summer of 1977.

norOntair Services

norOntair still provides daily airline service to 16 communities from Kenora in the northwest to North Bay in the southeast. The reliability of the service continued, for better than 97 per cent of scheduled flights were completed.

Ridership grew 31 per cent to 82,070 passengers in 1976.

Marine Services

The Ferry Chi-Cheemaun, operated by the Owen Sound Transportation Company and administered by the Ontario Northland Transportation Commission, completed its second operating season between Tobermory and South Bay Mouth.

Traffic was good despite below par weather and a generally poor tourist year with a modest growth of three per cent to 75,392 total vehicles carried over the season.

Rail Services

In 1976, a decision was made to acquire four passenger trains of the original Trans Europe Express network. These trains will be running from Toronto to Timmins and at least two of the four should be in service by the summer of 1977.

THE ONTARIO TELEPHONE SERVICE COMMISSION

The Ontario Telephone Service Commission is responsible for regulating independent telephone companies operating in Ontario pursuant to The Telephone Act, R.S.O.1970, Chapter 457.

As of January 1, 1977, there were 39 independent systems operating in Ontario with over 258,000 telephones and an estimated gross capital investment expenditure for plant and equipment of over \$130 million.

TORONTO AREA TRANSIT OPERATING AUTHORITY

Mounting costs and financial constraints continued through 1976 to be a primary concern for public transit in general. Inter-regional and municipal systems fine tuned operations to improve efficiency. The Authority was able to achieve some significant savings, but the most significant benefits, with the least inconvenience to the riding public, came from the elimination of duplicated services.

GO Transit, operating through other jurisdictions, often in the same corridors as the municipal systems, is in a position to propose co-ordination or integration of services and the elimination of duplication. In Metropolitan Toronto, TATOA policy now favours the termination of GO bus routes at suburban subway stations rather than running all buses into the downtown core. On Yonge Street, north of Metro, a conglomerate of services was integrated into a more efficient, more popular transit corridor under the GO banner; it has resulted in dollar savings to three municipalities, TATOA and the Province's transit subsidy fund. Ministry planners and our system analysts are seeking opportunities to initiate comparable co-ordination elsewhere in the area.

Certainly GO Transit has expanded its routes and increased capacity on established services. New routes became feasible with the delivery of 60 new buses, while revamped scheduling of the Lakeshore GO train helped increase patronage by nine per cent. By year end, the GO system in total was carrying in excess of 50,000 passengers per average working day.

During the year, a new bus service was inaugurated along the Highway 401 corridor from Milton to the York Mills subway station, giving commuters more convenient access to work places in northern Metro. This is compatible with long term plans of MTC and TATOA to

develop the 401 corridor and to feed the new Spadina subway at its Yorkdale Station. In this connection the province gave approval for the provision of bus terminal facilities at the Yorkdale Shopping Centre, adjacent to the subway station.

In conjunction with the rationalization of services in the Yonge Street corridor, which is mentioned above, GO Newmarket bus routes were extended north to Barrie and Sutton. Many Toronto trips were terminated at the Finch Subway which, coupled with GO's assumption of the local, municipally sponsored shuttle service between Finch and Richmond Hill, resulted in very heavy traffic into and out of the York Region Bus Terminal. This facility, immediately north of the subway station, has been part of the TTC station complex. At year end, ownership of the terminal was transferred to the Authority with responsibility for management and any necessary improvements to passenger and operation facilities.

Construction proceeded on the Richmond Hill rail line, working to a start-up date of late 1977. The 80 bi-level coaches being built by Hawker Siddeley in Thunder Bay experienced minor delays, but delivery was expected to commence also by late 1977. The provision of maintenance facilities for the expanded rail equipment fleet continued under active study, but as of the end of the fiscal year, no feasible and acceptable plan had been approved.

Work also continued on the redevelopment of stations on the Lakeshore GO train service, with first rebuilds scheduled for opening this spring. These redesigns feature improved interface facilities for use by local transit.

We would again comment on the co-operative approach demonstrated by area regions and municipalities, both councils and staffs, in dealing with our mutual concerns. Aided by Ministry of Transportation and Communications staff, a productive working relationship is evolving which augurs well for co-ordinated transit in the Toronto-centered area.

MINISTRY EXPENDITURE BY HIGHWAY

APRIL 1, 1976 TO MARCH 31, 1977

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster — Windsor	\$ 3,894,888	\$ 2,711,362
2A	Hwy. 401(MCF) — Hwy. 2 (Toronto)	104	—
3	Fort Erie — Windsor	5,110,548	1,895,823
4	Port Stanley — Flesherton	2,794	1,101,093
5	Toronto — Paris	393,264	531,083
6	Hwy. 24 — Tobermory	1,841,101	1,644,426
7	Ottawa — Sarnia	6,409,271	3,163,774
7A	Hwy. 115 — Hwy. 12 (Manchester)	16,280	172,952
7B	Peterborough — Chemong Corners	2,589	44,229
8	Winona — Goderich	1,746,448	791,564
9	Hwy. 11 — Kincardine	589,660	749,726
10	Port Credit — Owen Sound	721,484	769,110
11	Toronto — Rainy River	16,414,231	5,542,784
11B	At New Liskeard	372,558	55,252
12	Whitby — Midland (7)	1,980,777	602,636
14	Bloomfield — Marmora	102,440	204,651
15	Kingston — Ottawa	1,440,643	384,799
16	Johnstown — Ottawa	91,496	355,082
17	Quebec Boundary — Manitoba Boundary	21,099,707	6,242,823
17B	At North Bay	—	3,306
18	Leamington — Windsor	940,306	206,770
18A	Kingsville — Hwy. 18	1,533,030	83,184
19	Port Burwell — Tralee	61,913	440,357
20	Niagara Falls — Hamilton	2,188,509	420,765
21	Hwy. 3 (Morpeth) — Owen Sound	386,532	1,055,982
22	London — Hwy. 7	484,142	173,174
23	Hwy. 7 — Hwy. 9 Teviotdale	2,010	416,260
24	Hwy. 59 — Collingwood	137,000	799,196
24A	Paris — Galt	—	34,684
25	Oakville — Hwy. 89	535,436	422,094
26	Barrie — Owen Sound	185,991	510,739
27	Toronto — Penetanguishene	1,867,306	643,829
28	Port Hope — Bancroft	166,694	379,403
29	Brockville — Arnprior (15)	521,124	312,176
30	Brighton — Havelock	—	147,054
31	Morrisburg — Ottawa	84,633	296,417
32	Gananoque — Hwy. 15	24,484	53,937
33	Kingston — Stirling	86,618	391,493
34	Hwy. 2 (Lancaster) — Hawkesbury	26,481	221,206
35	Hwy. 401 (Newcastle) — Dwight	1,488,170	563,547
35A	Fenelon Falls — Hwy. 35	49,273	9,918
36	Burleigh Falls — Lindsay	678,782	204,665
37	Belleville — Hwy. 7 (Actinolite)	30,844	140,286
38	Kingston — Hwy. 7 (N. of Sharbot Lake)	85,515	245,042
40	Blenheim — Sarnia	3,810,591	397,290
40A	Sarnia By-pass	132,511	36,538
40B	At Sarnia	—	1,286
41	Napanee — Pembroke	1,628,785	632,686
42	Brockville — Westport (29)	17,159	159,289

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
43	Alexandria — Perth	36,240	537,227
44	Hwy. 17 — Hwy. 29 (Almonte)	—	54,353
45	Cobourg — Norwood	637,014	164,153
46	Hwy. 7 (E. of Manilla) — Coboconk	422	78,314
47	Hwy. 48 (N. of Hwy. 7) — E. of Hwy. 12	355,123	174,593
48	Toronto — Hwy. 46 (Bolsover)	761,512	402,290
48B	Jct. 12 and 48 to Jct. 48	—	33,119
49	Pictou — Hwy. 2 (W. of Desoronto)	—	67,752
50	Toronto — Hwy. 9 (N. of Palgrave)	86,127	245,811
51	Rondeau Prov. Park — Jct. Hwy. 3	—	17,889
52	N. of Hwy. 97S — Hwy. 2	1,033,627	124,572
53	Hamilton — Hwy. 2 (Eastwood)	18,735	245,645
54	Cayuga — Cainsville	1,556,238	243,222
55	Jct. Hwy. 8 — Niagara	223,966	95,990
56	Jct. Hwy. 3 — Jct. Hwys. 53 and 20	557,599	131,039
58	Port Colborne — St. Catharines	913,466	234,387
59	Long Point — Hwy. 3 (E. of Tillsonburg)	411	438,668
60	Hwy. 17 (W. of Renfrew) — Huntsville	2,181,411	735,180
61	International Boundary — Thunder Bay	44,179	118,861
62	Hwy. 14 (N. of Belleville) — Pembroke	1,249,593	775,334
63	North Bay — Quebec Border	3,240	233,987
64	Sturgeon Falls — Hwy. 11	3,179,250	447,637
65	Quebec Border — Matachewan	384,600	360,844
66	Quebec Border — Hwy. 65	9,085	279,657
67	Iroquois Falls — Hwy. 101	509	70,993
68	Hwy. 17 (Espanola) — S. Baymouth	912,185	430,767
69	Hwy. 12 (N. of Brechin) — Capreol	838,636	1,177,753
69B	At Parry Sound	9,546	—
70	Springmount — Hepworth	—	54,901
71	Fort Frances — Hwy. 17 (E. of Kenora)	775,924	296,855
72	Hwy. 17 (Dinorwic) — Sioux Lookout	1,074,080	118,172
73	Port Bruce — Dorchester	36,596	143,919
74	Hwy. 3 (New Sarum) — Nilestown	618	84,985
76	Hwy. 3 (Eagle) — Hwy. 2	—	73,018
77	Leamington — Hwy. 401 (N. of Comber)	—	85,901
78	Hwy. 21 (Dresden) — Wallaceburg	—	59,403
79	Hwy. 2 (Bothwell) — Hwy. 7	—	149,028
80	Hwy. 2 (S. of Glencoe) — Courtright	—	272,906
81	Delaware — Grand Bend	227,356	293,874
82	Hwy. 7 (Thedford) — Hwy. 21	—	50,682
83	Hwy. 23 (Russeldale) — Hwy. 21	8,492	197,094
84	Hensall — St. Joseph	303	79,730
85	Kitchener — Elmira	983,611	53,639
86	Guelph — Amberly	5,411	454,935
87	Harriston — Hwy. 86 (Bluevale)	591	133,757
88	Bradford — Hwy. 27 (Bond Head)	—	36,997
89	Hwy. 400 — Hwy. 23 (E. of Palmerston)	258,164	453,516
90	Barrie — Angus	39,174	89,409
91	Stayner — Duntroon	—	29,787

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
92	Elmvale — Wasaga Beach	4,746	59,868
93	Hwy. 11 (E. of Barrie) — Waverley	1,090	176,687
94	Callander — Hwy. 17 (S. of North Bay)	—	27,479
95	Hornes Point — Wolfe Island	—	39,348
96	Quebec Head — W. End of Wolfe Island	—	120,956
97	Hwy. 6 (Freelton) — Hickson	1,911	241,729
99	Dundas — Hwy. 24 (N. of Brantford)	997,563	140,516
100	Jct. Hwy. 401 to London	1,452,731	—
101	Quebec Border — Hwy. 17 (Wawa)	1,608,922	1,270,639
102	Thunder Bay — Sistonens Corners	1,465,789	79,564
103	Port Severn — Hwy. 69	2,217,038	—
105	Hwy. 17 — Red Lake	—	322,681
106	Hwy. 28 (Dale) — Hwy. 2 (Welcome)	4,783	12,994
108	Hwy. 17 — Hwy. 639 (Quirke Lake)	683,533	142,472
112	Hwy. 11 — Hwy. 66 (Swastika)	10,145 CR	69,068
115	Newcastle — Peterborough	359,959	151,501
117	Jct. Hwy. 11 — Jct. 35	1,214,537	124,237
118	Dorset — Hwy. 69	64,540	85,341
121	Hwy. 28 — Hwy. 35 (S. of Fenelon Falls)	2,773,350	535,005
122	Jct. QEW to Jct. QEW	33,600	—
123	Hwy. 11 — North Bay Airport	212,890	3,164
124	Sundridge — Parry Sound	154,475	249,331
125	Hwy. 105 — Red Lake	—	24,596
126	Hwy. 401 — Hwy. 2 (London)	13,205	44,662
127	Maynooth — Hwy. 60 (E. of Whitney)	375,775	100,916
129	Thessalon — Chapleau	1,461,841	665,299
130	Port Arthur — Hwy. 61	36,631	26,936
132	Renfrew — Hwy. 41	16,559	73,748
133	Hwy. 33 (Millhaven) — Hwy. 401	1,200	29,902
134	Jct. Hwy. 7 — Jct. Hwy. 28 (Lakefield)	64,979	46,852
135	Hwy. 401 — Hwy. 2 (London)	726	23,920
136	Hwy. 24 — Orangeville	514 CR	58,351
137	Hwy. 401 — Thousand Island Bridge	—	19,093
138	Cornwall — Monkland	577,303	137,780
140	Hwy. 3 (Port Colborne) — Hwy. 20	37,414	77,910
141	Hayes Corners Hwy. 69 — Jct. Hwy. 11	58,104	169,802
144	Sudbury — Hwy. 101	653,402	927,491
169	Jct. Hwy. 12 to Jct. Hwy. 69	—	151,164
400	Toronto — Hwy. 12 (Coldwater)	525,251	1,781,799
401	(MCF) Quebec Border — Windsor	16,877,090	9,483,518
402	Hwy. 7 — Blue Water	12,826,984	70,967
403	Burlington — Brantford	6,763,457	608,309
404	Toronto — Hwys. 7 and 12	7,205,851	66,826
405	QEW — International Bridge (Queenston)	8,249	101,169
406	Hwys. 20 — 58 — QEW	490,219	139,643
407	Hwys. 35 and 115 — Hwy. 27	3,841	—
409	Belfield Expressway Hwy. 401 — International Airport	3,376,361	141,209
410	Hwy. 401 — Hwy. 7 Brampton	482,261	—

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
416	Johnstown — Ottawa	153,552	—
417	Quebec Boundary — Ottawa	6,004,834	889,254
420	QEW — Rainbow Bridge (Niagara Falls)	5,381	61,057
427	QEW — Hwy. 401	4,171,472	537,399
451	(QEW) Toronto — Fort Erie	9,110,877	3,822,489
458	Ottawa Queensway	188,077	233,365
463	Brantford Southern By-pass	41,398	—
TOTAL KING'S HIGHWAYS		\$182,560,248	\$ 71,866,293

SECONDARY HIGHWAYS

500	Denrich — Bancroft	1,528	163,055
503	Tory Hill — Kirkfield	312,715	360,585
504	Hwy. 620 — Apsley	1,019	90,029
505	Hwy. 46 — Uphill	—	58,821
506	Plevna — Hwy. 41	568,257	115,771
507	Hwy. 28 (Lakefield) — Hwy. 503	1,383,992	200,664
508	Barnstown — Black Donald Mines	1,444,448	152,948
509	Hwy. 7 — Snow Road Station	87,497	70,071
510	Magnetawan — Hwy. 124	—	8,114
511	Brightside — Hwy. 508	18,395	129,565
512	Eganville — Hwy. 60	94,492	116,830
513	Hwy. 132 — E. of Hyndford	—	41,666
514	Hwy. 500 — Hwy. 515	—	32,272
515	Hwy. 512 — Combermere	489,117	154,568
517	Twp. Rd. (Near New Carlow) — Hwy. 62	914	36,940
518	Sand Lake — Hwy. 69	131,044	341,264
519	Hwy. 121 — Redstone Lake	313,394	174,292
520	Burk's Falls — Ardbeg	1,768,227	214,337
522	Hwy. 11 — West of Loring	1,563,579	413,627
523	Lyell Twp. Line — Hwy. 60	1,880	56,666
524	Hwy. 522 — Hwy. 534 (E. of Restoule)	—	18,316
526	Hwy. 69 — W. of Britt	19,022	21,375
527	Jct. Hwys. 11 and 17 Northerly	629,729	353,799
528	Wolseley Bay — Hwy. 64	8,068	60,219
528A	Pine Cove Landing — Hwy. 528	—	33,375
529	Hwy. 69 — Hwy. 69 (Magnetawan River)	—	145,901
529A	Hwy. 529 — Bayfield Wharf	—	27,879
530	Hwy. 519 — Hwy. 35 (Carnarvon)	5,949	54,990
531	Bonfield — Hwy. 17	—	11,909
532	Hwy. 11 (S. of Bracebridge) — Hwy. 69	250	37,294
533	Mattawa — Hwy. 63	14,475	157,488
534	Powassan — Restoule	392,824	144,969
535	Hwy. 64 — Riviere Veuve	47,464	231,484
537	Hwy. 69 — Hwy. 17 (Wannapitae)	196,680	126,728
538	Algoma Miners Loop	—	21,875
539	Hwy. 64 — Warren	16,704	218,329
539A	Hwy. 539 — Tert. Road 805	—	32,185
540	Little Current — Meldrum Bay	1,760,395	542,410
540A	Hwy. 540 — Barrie Island	—	26,604

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
540B	Hwy. 540 to Gore Bay	—	917
541	Sudbury — Skead	72,188 CR	—
542	Hwy. 68 — Gore Bay	244,853	285,898
542A	Hwy. 542 — Tehkummah	—	9,246
545	Hwy. 541 — Milnet	2,436	—
546	Hwy. 17 — Mississagai Prov. Park	354,670	229,601
547	Hwy. 101 — Hank Jct.	—	15,746
548	Hilton Beach — Hwy. 17	168,032	241,618
549	Lake Panache — Hwy. 17	106,493	50,887
550	Sault Ste. Marie — Gross Cap	154,052	26,106
551	Province Bay — Hwy. 540	1,097,020	77,256
552	Hwy. 556 — Twp. Road (E. of Hwy. 17)	140,882	51,383
552A	Hwy. 552 — Hwy. 17	—	4,143
553	Massey — Richie Falls Camp	38,934	135,691
554	Hwy. 546 — Hwy. 129	32,462	45,500
555	Magog Lake — Hwy. 557	13,712	34,287
556	Hwy. 17 (Heyden) N. Easterly	605,335	282,389
557	Blind River northerly	—	61,539
558	Haileybury — Montreal River	6,033	71,379
559	Hwy. 69 Nobel — Hwy. 69	—	120,779
560	Hwy. 11 — Hwy. 144 (S. of Gogama)	355,617	584,568
560A	Westree — Hwy. 560	—	27,072
561	Bruce Mines — Hwy. 638	—	81,845
562	Hwy. 11 (E. of Thornloe) — Hwy. 65	—	38,501
563	Batchawana — Hwy. 17	580	14,089
564	Blanche River Bridge — Hwy. 112	—	29,042
565	Pte Aux Pins — Hwy. 550	18,814	4,143
566	Matachenan — Ashley Mine	200	71,905
567	E. of Silver Centre — N. Cobalt	—	91,988
568	Hwy. 11 — Kenogami	—	6,353
569	Hwy. 11 — Hwy. 11 (S. of Englehart)	54,690	74,864
570	Sesekinoko — Hwy. 11	—	8,129
571	Hwy. 562 — Earltown	—	15,402
572	Hwy. 11 Ramore — Hwy. 101	42,721	62,397
573	Charlton — Hwy. 11	365	51,764
574	Cochrane — Norembega	93,003	101,751
575	Jct. Hwy. 17 — Jct. Hwy. 64	24,492	93,656
576	Hwy. 101 — Kam-Kotla Mine	—	64,494
577	Hwy. 101 — Iroquois Falls	44,856	65,348
578	Iroquois Falls — Hwy. 11	434	20,741
579	Cochrane — Gardiner	74,353	89,117
580	Hwy. 11 — Lake Nipigon	—	24,401
581	Hwy. 11 — Remi Lake	—	31,719
582	Hurkett — Hwy. 17	—	12,676
583	Mead — Lac Ste Thérèse	58,902	194,216
584	Hard Rock Mine — Nakina	478,623	139,355
585	Hwy. 11 — Pine Portage	67,788	70,984
586	Hwy. 11 — Lower Shebandowan Lake	—	11,440
587	Silver Islet — Hwy. 11 and 17	167,911	82,390

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
588	Stanley — Round Lake Road	20,987	106,160
589	Hwys. 11A and 17A — Dog Lake Road	34,637	64,831
590	Hwy. 130 — Hwy. 588 (Nolalu)	41,464	50,963
591	Hwy. 589 Northerly	8,245	16,987
592	Hwy. 11 (Novar) — Hwy. 11	—	47,178
593	Hwy. 61 — Hwy. 588 (Nolalu)	85,304	99,905
594	Dryden — Hwy. 17	35,852	78,441
595	Hwy. 597 — Hwy. 590	282,912	84,354
596	Kenora — N. of Minaki	197,533	142,386
597	Pardee — Hwy. 608	129,006	32,792
598	Hwy. 604 — Hwy. 128 (N. of Kenora)	2,561	7,928
599	Ignace — Tert. Road 808	4,237,465	653,154
600	Hwy. 71 — Rainy River	32,878	196,999
601	Hwy. 17 — Dryden	29,695	55,827
602	Fort Frances — Emo	—	163,314
603	Hwy. 17 — Dymont	22,938	8,046
604	Hwy. 17 — Kenora Airport	975	15,394
605	Hwy. 17 — Rugby Lake	370	72,826
607	Hwy. 69 — (Big Wood) — Hwy. 64	4,718	36,212
607A	French River — Hwy. 607	—	11,557
608	Hwy. 61 — Hwy. 595 (S. Gillies)	210,415	37,711
609	Hwy. 105 — Clay Lake	27,517	32,992
610	Hwy. 67 — Hwy. 101 (Hoyle)	22,390	91,783
611	Hwy. 602 (Sherwood) Northerly	31,336	43,272
612	Hwy. 103 (Mactier) — Hwy. 69	—	12,320
613	Hwy. 602 — Lake Despair	62,365	139,225
614	Hwy. 17 — Manitouwadge	—	144,616
615	Hwy. 17 — Burditt Lake	42,794	62,657
616	Hwy. 101 — Palomar	—	8,321
617	Hwy. 11 (Stratton) — Hwy. 600	120,916	165,900
618	Red Lake — Madsen	29,204	21,180
619	Hwy. 11 (Pinewood) — Hwy. 621	8,398	91,378
620	Hwy. 62 — Hwy. 28 (Apsley)	5,653	133,009
620A	Hwy. 62 — Hwy. 28	—	1,194
621	Hwy. 11 — Lake of the Woods	—	90,855
622	Hwy. 11 (Atikokan) Northerly	—	24,084
623	Hwy. 11 — Sapawe	—	9,823
624	Hwy. 11 — Larder Lake	550	113,900
625	Caramat — Hwy. 11	130,805	82,093
627	Heron Bay — Hwy. 17	—	21,548
628	Red Rock — Hwys. 11 and 17	—	13,944
629	Timmins — Timmins Airport	—	26,214
630	Kiosk — Hwy. 17	9,575	87,429
631	South of Hornepayne — Hwy. 11	425,373	445,392
632	Hwy. 118 — Rosseau	—	60,267
633	Hwy. 11 — Kawene	—	11,724
635	Hwy. 17 — Ottawa River Bridge	—	6,471
636	Hwy. 11 — Frederick House	9,978	12,339
637	Hwy. 69 — Killarney	—	264,175

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
638	Dunns Valley — Echo Bay	171,145	131,310
639	Hwy. 108 — Hwy. 546	—	78,759
640	Hwy. 571 — Earleton Airport Entrance	—	7,272
641	Hwy. 17 — Pellatt	44,021	29,885
642	Algoma — Sioux Lookout	—	138,129
643	Hwy. 584 — Twp. Road to Cavell	87,120	38,660
644	Hwy. 69 (Pte. Au Baril) E'ly	7,865	5,957
645	Hwy. 529 — Bing Inlet	—	13,630
646	Pickle Crow — Central Patricia	—	21,232
647	Hwy. 17 — Blue Lake Prov. Park	—	14,815
648	Dyno Mine — West Jct. Hwy. 121	32,233	138,747
649	Bobcaygeon — Hwy. 121	—	54,378
650	O.N.R. Right-of-Way — Hwy. 112	—	19,555
651	Hwy. 101 — Missanabie	—	152,587
652	Wade Lake — Hwy. 574	42,302	44,966
653	Portage Du Fonte Bridge — Hwy. 17	120,026	34,762
654	Hwy. 11 — Nipissing	—	109,425
655	Timmins — Ward Kidd Twp. Bdry.	188,506	55,757
656	Hwy. 533 northerly	—	12,799
657	Gold Pines — Hwy. 105	—	10,648
659	Hwy. 604 — Hwy. 128	—	42,611
660	Bala — Hwy. 103	811,715	52,588
661	Gogama — Hwy. 144	—	14,147
663	Hwy. 11 (W. of Hearst) N'ly	37,078	13,830
664	Hudson — Hwy. 72	—	30,961
665	Hwy. 17 — Richan	—	111,184
666	Kenora — Redditt	4,278	66,095
TOTAL SECONDARY HIGHWAYS		\$ 23,499,231	\$ 14,753,688

TERTIARY ROADS

801	Hwy. 11 — Namewanikan River	—	32,129
802	Hwy. 11 — Burchell Lake	23,700	31,548
803	Hwy. 575 — (Hwy. 101 — 3 mi. South)	—	9,274
804	Hwy. 105 — Lower Manitou Falls	—	23,053
805	Hwy. 539A (River Valley) — Pond Lake	14,204	50,526
807	Smooth Rock Falls — Fraserdale	410,389	182,510
808	Hwy. 646 — Otosilwin River	—	114,082
809	Hwy. 564 — End of Hwy.	—	9,894
810	Hwy. 553 — Ritchie Falls	—	51,860
811	Tert. Road 800 Northwesterly	—	32,938
812	Manitou Road — Hwy. 11 N'ly	1,533,065	59,939
TOTAL TERTIARY ROADS		\$ 1,981,358	\$ 597,753

ACCESS AND INDUSTRIAL ROADS

708	Marchington Lake Road	2,940,011	—
719	Uchi Lake Road	—	54,671
773	Garden Lake Road	141,870	—
788	Moosonee Access Road	157,091	—

MINISTRY EXPENDITURE BY HIGHWAY

ACCESS AND INDUSTRIAL ROADS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
795	Sherman Mine Road	—	2,656
799	Caramat-Manitouwadge Road	—	65,555
TOTAL ACCESS & INDUSTRIAL ROADS		\$ 3,238,972	\$ 122,882

UNINCORPORATED TOWNSHIPS

99	Statute Labour Boards	101,489	158,139
9	Local Roads Boards	1,372,927	1,834,524
7	Special Settlers	146,798	41,678
2	Indian Reserves	57,067	59,974
TOTAL UNINCORPORATED TOWNSHIPS		\$ 1,678,281	\$ 2,094,315

SPECIAL PROGRAMS

449	Tobermory Ferry	103,683	—
450	Other Ferry Service	166,760	1,682,135
706	St. Thomas By-pass	41,696	—
723	Thunder Bay Expressway	123,608	—
731	Sudbury By-pass	61,106	44,162
732	North Bay By-pass	7,488	—
735	Kitchener-Waterloo Expressway	151,574	—
737	Hanlon Expressway	60,731	—
762	East Main St. Tunnel	160,340	48,881
763	Thorold Tunnel	5,633	—
765	Townline Road Tunnel	18,439	21,584
790	Hydro Development Road	1,461,399	—
797	Airstrip Development	1,662,144	699,228
923	Perley Bridge	—	98,322
952	Sidewalks	24,173	—
959	Ice Storm Charges	—	57,510
7087	E.C. Row Expressway	3,732,806	16,770
7118	Brantford Expressway	613,124	17,238
	Service Centres	—	22
8905	Lands & Buildings	1,294,224	768,868
8954	Weigh Scales	369,003	583
	Development Roads	6,322,559	27,476
	Connecting Links	13,154,135	1,039,723
TOTAL SPECIAL PROGRAMS		\$ 29,534,625	\$ 4,522,502
HIGHWAY TOTALS		\$242,492,715	\$ 93,957,433
Sundry Unallocated, District Office Administration, Engineering Building, Inventory Charges, etc.		(3,510,242)	20,126,799
TOTAL EXPENDITURE		\$238,982,473	\$114,084,232

**CONVICTIONS REGISTERED
UNDER THE
HIGHWAY TRAFFIC ACT**

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCE	1975	1976
6	Fail to register a vehicle	1,628	2,704
7 (1)	False statement	80	95
7 (2)	Fail to notify new address	3,723	3,271
8	Fail to have number plates	12,055	11,356
9	Violations as to number plates	5,063	5,323
10	Improper use of number plates	633	912
13	Fail to have operator's licence	16,169	15,624
14	Fail to produce operator's licence	13,978	17,015
16	Fail to have chauffeur's licence	242	248
17	Fail to produce chauffeur's licence	927	1,131
18	Operation of motor vehicle by person under 16	311	309
27 (2)	Unlawful possession of permit	43	43
27 (3)	Unlawful possession of licence	171	218
30 (b)	Driving while licence is suspended H.T.A.*	23	273
35	No garage licence	11	31
36	Record of wrecked vehicle violation	20	56
37	Improper lights	10,311	11,803
39	Defective brakes	2,308	1,740
41	Faulty equipment (mirror, windshield, etc.)	739	939
47	Driver's view obstructed	150	188
48	Windows obstructed	1,367	1,728
49	Excessive noise/smoke/fumes	28,173	27,319
50	No slow-moving-vehicles sign	50	69
53	Fail to have proper trailer attachments	729	906
	*Royal Assent February 6, 1975		
55 (2)	Unsafe vehicle	6	5
55 (3)	Failing to submit to vehicle inspection	816	1,151
57	Drive unsafe vehicle	3,753	4,019
58	Certificate of mechanical fitness violation	142	125
61	No name of owner on commercial vehicle	377	814
62	Drive/ride motorcycle no safety helmet	1,316	1,384
63A (2)	Remove/modify/inoperative seat belt assembly	—	842
63A (3)	Failure/improper use seat belt assembly — driver	—	7,893
63A (4)	Passenger — failure to ensure seat belt use	—	1,652
63A (6)	Driver — failure to ensure passenger seat belt use	—	147
64	Overweight	94	108
65 (6)	Special permit violation	427	583
66 (1)	Overload in excess of permit	3,608	3,917
66 (2)	Fail to produce commercial ownership permit	1,208	1,746
66 (4)	Spring Regulations — Overload	59	56
68	Overhanging load	2,209	2,044
70	Excessive width or length of vehicle	1,216	1,431
82	Speeding 30 mph or more over limit	5,302	6,587
	Speeding more than 19 less than 30 mph	39,677	48,411
	Speeding more than 10 less than 20 mph	190,119	224,774
	Speeding under 11 miles per hour	472,254	529,268
83	Careless driving	19,031	17,446
85	Unnecessary slow driving	271	186
86	Fail to obey signal of police officer	277	294
87	Fail to yield right of way	304	305
88	Fail to stop at through highway	57,817	58,377
90	Fail to obey yield sign	1,015	959
91	Fail to yield — from private road	6,761	7,632
92	Pedestrian crossover violation by driver	5,427	5,689

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1975	1976
93 (1)	Improper right turn at intersection	3,521	3,631
93 (2)	Improper left turn at intersection	5,497	5,305
93 (3)	Improper left turn into intersecting highway	4,426	4,265
93 (4)	Improper left turn from one-way highway	1,669	1,849
93 (5)	Improper left turn into one-way highway	344	508
93 (6)	Improper left turn from one-way highway to one-way highway	1,777	1,022
94 (1)	Fail to signal for turn	11,958	12,393
94 (2)	Fail to signal — moving from parked position	2,864	3,427
94 (4A)	Improper manual signal	0	2
94 (5)	Improper directional signal	105	78
94 (6)	Improper use of signaling device	101	83
94 (7) (7B)	Fail to signal	144	144
95	Prohibited U-turns	586	691
96 (5)	Disobey red signal light	41,905	46,555
96 (6)	Disobey an amber signal light	13,018	14,496
96 (7) (8) (9)	Flashing red-amber-green arrow	1,561	1,639
96 (10)	Fail to give right-of-way to pedestrian	884	947
96 (11)	Prohibited turn	29,460	33,465
96 (19)	Disobey traffic signal	2	0
97	Drive right side of multi-lane highway	506	309
98 (1) (2)	Fail to share the road	2,830	2,824
98 (3)	Fail to move to right	337	229
98 (4)	Vehicle or horsemen overtaking others	486	516
98 (5)	Horsemen or vehicles overtaking bicycles or tricycles	13	29
98 (6)	Improper passing	15	20
98 (7)	Improper passing	2,076	1,593
99	Drive left of centre of highway	2,533	2,208
100 (1)	Passing to right of vehicle	19	9
100 (2)	Unsafe passing to the right	4,248	3,451
102	Wrong way on a one-way street	7,603	7,208
103 (a)	Unsafe lane change	5,587	6,005
103 (b)	Drive in centre lane of three lane highway	56	58
103 (c)	Fail to drive in slow moving traffic lane	1,429	1,710
104 (a) (b)	Improper driving on divided highway	992	1,062
105 (1)	Following too closely	17,853	18,259
105 (2)	Following too close in commercial vehicle	374	343
106 (1)	Fail to yield to fire department vehicle, etc.	278	280
106 (2)	Following a fire department vehicle	22	19
109	Crowding driver	568	524
110	Fail to stop for crossing (signal)	216	216
111	Drive through, under or around railway barrier	220	199
112	Improper opening of vehicle door	465	475
113 (1)	Improper approach or passing a stopped streetcar	133	150
113 (2)	Pass streetcar on left side	49	31
114	Improper driving when approaching horses	0	2
115	Fail to use passing beam	1,901	1,772
116	Improper parking on highway	1,588	1,871
116 (8)	No warning lights on commercial vehicle	30	29
116 (9)	No flares	35	25
117	Racing	179	176
119 (b)	Failure to stop school bus or public vehicle at railway crossing	21	23
120 (2)	Fail to stop for school bus	2,751	3,123

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1975	1976
120 (3)	School bus: Fail to actuate signals	15	26
120 (5)	School bus: Failure to cover signals and signs	7	17
124	Littering highway	840	793
125 (2)	Fail to obey a direction sign	4,331	4,141
139	Fail to report an accident	2,924	3,071
140	Fail to remain at the scene of accident	2,660	2,613
141	Fail to report damage to highway property	635	590
	Other offences	408	302
	TOTAL	1,099,445	1,227,947

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

424	School bus violation	46	20
418 (13) (14)			
(15) (16)	Number plate violation	69	143
418 (24)	Instruction permit violations	1,059	183
418 (25) (2)	Drive motorcycle, no endorsed licence	4,558	4,318
418 (27)	Restricted licence violation	733	702
418 (28)	Fail to notify name/address change	4,094	3,735
418 (29) (1)			
a b c d e	Driver licence violation	718	653
418 (39)	Seat belt violation	0	3
418 (40)			
(1) (2) (3)	Motorcycle violation	291	231
421 (4)	Improper parking	236	118
433 (14)	Prohibited use of studded tires	164	164
	Others	4,113	2,299
	TOTAL	16,081	12,569

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

203	Criminal negligence causing death	13	8
204	Criminal negligence causing bodily harm	11	6
233 (1)	Criminal negligence	86	104
233 (2)	Fail to remain	2,146	2,123
233 (4)	Dangerous driving	1,421	1,468
234	Drive ability impaired	25,466	24,333
235 (2)	Fail to take breathalyzer	3,485	3,379
236	Over .08 alcohol	14,503	14,907
238 (3)	Drive while disqualified	6,098	8,809
	Others	7	3
	TOTAL	53,236	55,140

SUMMARY OF CONVICTIONS

Criminal Code	53,236	55,140
Highway Traffic Act	1,099,445	1,227,947
Regulations H.T.A.	16,081	12,569
Municipal bylaws	23,140	34,108
Motor Vehicles Accident Claims Act	11,333	12,217
Public Commercial Vehicles Act	441	957
TOTAL	1,203,676	1,342,938

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCE	1975	1976
2 (1)	Drive or permit to drive unregistered vehicle	275	234
2 (2)	Fail to register	—	40
2 (3)	Fail to provide evidence of issue of permit (no plate)	681	409
2 (7)	Fail to display registration number	—	27
2 (8)	Fail to display evidence of permit	32	127
3 (1)	Make false statement	2	1
3 (2)	Fail to notify change of address	2	1
3 (3)	Fail to notify change of ownership	15	4
4	(Plate) — Registration number obstructed	0	3
4 (2) A & B	Use defaced or altered plates	14	0
4 (2) C	Improper plates	0	0
5	Drive on prohibited highway	42	202
6 (2)	Drive in area not designated	2	3
7	Improper crossing of roadway	—	6
7 (1)	Person under age 16 drive on highway	3	1
7 (2)	Permit person under age 16 to drive on highway	51	—
7 (3)	No drivers licence	221	43
7 (5)	Permit unlicensed person to drive	16	4
8 (1)	No operators licence	35	184
8 (2)	Drive across highway no licence	—	2
11 (1)	Operate (or permit operation uninsured vehicle	317	112
11 (2)	No insurance	24	118
11 (3)	Fail to produce evidence of insurance	71	99
11 (4)	Produce false evidence of insurance	0	0
12 (1)	Fail to report collision	17	14
12 (2)	Police officer fail to forward report of accident	2	1
13 (1)	Speeding	13	21
13 A	Careless driving	36	66
14 (1)	Fail to produce licence	7	58
15 (1)	Improper muffler	—	3
16	Towing on serviced roadway prohibited	—	6
17	No helmet	46	186
	Others	24	19
	Total	1,948	1,994

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

2	Disobey police officer	5	4
3	Fail to yield to vehicle on right	1	0
4	Disobey sign	10	6
5 (1) (b)	Fail to yield from adjoining property	2	4
5 (2)	Improper crossing of roadway	0	0
6 (3)	Improper left turn	3	1
7 (1)	Fail to signal	2	1
7 (2)	Fail to signal from stopped position	0	0
7 (3)	Improper signal	0	0
7 (4)	Fail to signal stop	0	0
8 (a)	U-Turn — no clear view	0	0
8 (b)	U-Turn — railway crossing	0	0
8 (c)	U-Turn — on hill — no clear view	0	0
9	Disobey traffic signal light	0	0
10 (1)	Fail to share roadway	1	2
10 (2) (b)	Passing when roadway not clear	0	0
11	Drive left of centre	2	2
12	Pass on right — not in safety	0	0

SECTION	OFFENCES	1975	1976
13	Following too closely	1	0
14 (1)	Fail to stop at railway crossing	1	0
14 (2)	Cross railway improperly	0	0
15 (1) (a)	Park on roadway	0	0
16	Speeding	0	1
17	Careless driving	—	15
19 (a)	Drive on Kings Highway (prohibited)	0	0
20	Improper lights	2	0
21	Improper or no lights	5	13
	Others	21	71
	Total	56	120

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

233 (2)	Fail to remain	4	0
233 (4)	Dangerous driving	20	11
234	Impaired driving	9	25
235 (2)	Fail to take breathalyzer	2	0
236	Over .08 alcohol	8	3
238 (3)	Drive while disqualified	17	3
	Total	60	42

MUNICIPAL BYLAWS

(MOTORIZED SNOW VEHICLES)	39	41
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SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	1,948	1,994
Criminal Code of Canada	60	42
Regulations	56	120
Bylaws	39	41
Total	2,103	2,197

SUSPENSIONS

COURT ORDERED SUSPENSIONS H.T.A.

Careless driving	1,105	871
Speeding over 30 mph	220	230
Racing	37	40
Fail to remain	220	168
Driving while licence suspended (H.T.A. Section 30b)*	2	33
Others	97	42

*Royal Assent February 6, 1975	1,681	1,384
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DEMERIT POINT SYSTEM SUSPENSIONS

15 point accumulation	7,043	6,600
Fail to attend interview	2,358	1,769
As a result of interview	255	238
	9,656	8,607

DISCRETIONARY SUSPENSIONS (HTA — SECTION 27)

Medical or physical condition	1,147	1,556
Operating record	1,191	1,404
	2,338	2,960

SUSPENSIONS	1975	1976
SUSPENSION FOR:		
Motor Vehicle Accident Claim	5,619	5,978
Failure to pay Judgment	1,012	1,182
Default in payment of traffic fine	<u>50,305</u>	<u>44,289</u>
	56,936	51,449
MANDATORY SUSPENSION H.T.A.		
Criminal Negligence	110	107
Dangerous driving	1,362	1,394
Impaired	24,751	23,254
Fail to provide breath sample	3,355	3,172
Blood/Alcohol .08	14,160	14,155
Fail to remain at scene	2,063	1,986
Drive while disqualified	<u>5,885</u>	<u>8,437</u>
	51,686	52,505
TOTAL	122,297	116,905

DRIVER DERMIT POINT SYSTEM

6 POINT LEVEL		
Advisory letters issued	103,747	113,266
9 POINT LEVEL		
Interviews conducted	30,112*	27,129
*Includes 2,500 drivers who received special warning letter in lieu of interview.		

SUSPENSION

Drivers who reached suspension level through point accumulation	7,043	6,600
Drivers suspended for failure to attend interview	2,358	1,769
Drivers suspended as a result of interview**	<u>255</u>	<u>238</u>
Total suspensions under point system	9,656*	8,607

**Because of unfavourable records and/or attitudes.

LICENCE CANCELLATION*

Licences cancelled due to unsatisfactory driver re-examination at time of point system interview.	4	6
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*In-car driving test at 9 point interview discontinued November 25, 1974.

DRIVER MEDICAL REVIEW

Total Cases Reviewed	4,430	5,510
Satisfactory Reports	3,723	4,485
Unsatisfactory Reports	707	1,025
Drivers subject to periodic Medical Maintenance Reporting*	1,559	1,773

*Included in Satisfactory Report Totals

MEDICAL REVIEW SCHOOL BUS DRIVERS	1975	1976
Total Cases Reviewed	4,327	3,954
Satisfactory Reports	4,290	3,927
Unsatisfactory Reports	37	27
Drivers Surrendering School Bus Authority as Endorsement No Longer Required	1,074	1,157
DRIVER OPTOMETRICAL REVIEW		
Total Cases Reviewed	1,584	1,912
Satisfactory vision reports filed	383	412
Drivers required to wear prescribed lenses while driving — no previous restriction	1,140	1,425
Unsatisfactory visual acuity	41	67
Unsatisfactory visual field	20	8

SUMMARY SHEET

NUMBER OF LICENSED DRIVERS IN ONTARIO	1974	1975	1976
	3,972,980	4,160,623	4,315,925
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,225,915	1,203,676	1,342,938
Motorized Snow Vehicles	2,360	2,103	2,197
*Motor Assisted Bicycles	<u>0</u>	<u>1,505</u>	<u>—</u>
TOTAL	1,228,275	1,207,284	1,345,135
TOTAL DRIVER LICENCE SUSPENSIONS APPLIED	110,374	122,297	116,905
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED			
School Bus Drivers	5,265	4,327	3,954
All others	<u>6,312</u>	<u>6,014</u>	<u>7,422</u>
TOTAL	11,577	10,341	11,376
*Defined as Motor Vehicle January 1, 1976			

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ANNUAL REPORT 1977=78



Ministry of
Transportation and
Communications



ANNUAL REPORT

For the
fiscal year
ending
March 31, 1978



Ministry of
Transportation and
Communications



Office of the
Minister

Ministry of
Transportation and
Communications

416/965-2101

Ferguson Block
Queen's Park
Toronto Ontario

*To: The Honourable Pauline M. McGibbon,
O.D., B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario*

MAY IT PLEASE YOUR HONOUR:

*The undersigned takes pleasure in laying before you the
Annual Report for the Ministry of Transportation and
Communications for the fiscal year ending March 31, 1978.*

Respectfully submitted,

A large, stylized handwritten signature in dark ink, appearing to read "James Snow".

*James Snow
Minister*



Office of the
Deputy Minister

Ministry of
Transportation and
Communications

416/248-3604

East Building
Downsview Ontario

*To: The Honourable James Snow
Minister of
Transportation and Communications, Ontario*

Sir:

*I have the honour to present the report of the activities
of the Ministry of Transportation and Communications for
the fiscal year ending March 31, 1978.*

Respectfully submitted,

A handwritten signature in dark ink, reading "Harold Gilbert".

*Harold Gilbert
Deputy Minister*

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DEPUTY MINISTER'S SUMMARY

In keeping with current government policy, the Ministry has made a significant contribution to the economic well-being of the Province of Ontario during this past fiscal year.

Specifically, the Ministry made the best possible use of human and financial resources to provide Ontario residents with safe, efficient and economical transportation and communication services.

Commendably, this task was achieved through the continued efforts of staff determined to make MTC a leaner, stronger, more responsive, results-oriented organization.

The Ministry also made an important contribution toward the establishment of the new Ministry of Northern Affairs, which was created to meet the needs of residents living north of the French River.

Working in conjunction with MNA, MTC provides the necessary planning and supervision for the highway construction program in Northern Ontario.

Under the provincial highway program, \$248 million was spent on highway improvements and construction, including a \$46 million expenditure by MNA on northern highways. Approximately 170 new contracts were awarded during the fiscal year involving work on two-lane, multi-lane divided and undivided highways and structures at numerous locations across the province.

In addition, \$125 million was spent on the maintenance of Ontario's highway system and the Ministry contributed \$344,583,236 toward municipal road building programs.

But, the automobile is no longer our only mode of transportation. As fuel becomes a costly commodity, public transit will become increasingly popular. And as an incentive to create a more efficient transit system, MTC has adopted a new method of computing operating transit subsidies based on population. It provides special assistance to new transit services as a means to offset the usual low ridership experienced during the first year of operation.

Under the Ministry's transit subsidy program, this past year, a total of \$152 million was granted to Ontario municipalities for improvements to their public transportation facilities.

These subsidies allowed for improvements such as the January opening of the Spadina Subway, the east-west extensions of the Bloor Subway; and the arrival of six new Swiss-made streetcars designed by Urban Transportation Development Corporation (UTDC).

And, more and more people are turning to GO Transit as an efficient and economical way of getting from place to place. To meet the demands for extra capacity, especially during rush hours, the new double decker coaches on the Lakeshore GO Train service have proved highly successful. All 80 of them should be in service by October.

Also, to maintain existing facilities, redevelopment is underway at three new GO stations along the same route.

A new service to Richmond Hill, which included four new stations, was officially opened April 29. It provides three return trips daily over the 35-kilometre route.

At the same time, the revamping of GO Bus service continues and 12 new buses have been added to the fleet to handle increased patronage.

Car and van pooling is also on the rise. Funds were allotted for a project currently underway at Downsview. Share-A-Ride encourages MTC employees to car pool.

Also, as a necessary part of moving people and goods, MTC provides ferry services. Under this program, MTC loaned and subsidized the "Upper Canada", running between Pelee Island and Leamington on the mainland. The "Upper Canada", operated by Pelee Township, carries 14 vehicles and 49 passengers, and is the only vessel providing ferry service to Pelee Island.

In the air, norOntair reached a new high carrying more than 9,600 passengers a month, and the addition of Red Lake brings the number of communities served to 17.

Under the Airport Development Program, runways were improved at municipal airports in Cochrane, Iroquois Falls and Wawa and improvements are scheduled at 13 other locations.

Two more remote airstrips are underway at Bearskin Lake and Webequie to bring the total of these all-weather airstrips to 13.

This program, originally designed for northern Ontario has been expanded to include eastern Ontario — where a study is underway to determine air service requirements at small airports.

In the communications area, a four-year, \$16 million project by MTC and Bell Canada to bring long-distance telephone service to 20 isolated communities in northwestern Ontario has been completed.

The basic design will permit the eventual addition of equipment to carry the transmission of radio and television.

Elsewhere in the province, communications play an equally important role. A welcome decision came from the CRTC when they approved — in principle — the establishment of a multi-lingual television station for the Toronto area. This new service should provide TV programs in a variety of languages and promote better understanding among cultural groups.

And, as part of a national plan, 21,000 km of provincial highways and 42,000 road signs were changed to metric.

To correspond with these metric changes, the new official Ontario road maps provide point-to-point distances in kilometres and are scaled to metric measurement.

A second phase began in April 1978 when all commercial vehicle permits, vehicle weights, dimensions and weight restrictions were changed to metric measurements.

Another major change was the introduction of a new driver licensing classification system. Under this, driver licensing and testing is geared to the type of vehicle being driven.

Each year, new legislation is passed to ensure that certain highway safety practices are followed, and each year the results are more encouraging.

In 1977, traffic-related deaths on Ontario's roads dropped to the lowest level since 1962, reflecting the use of seat belt and lower speed limit legislation adopted in 1976. Consequently, health care costs for treating motor vehicle injuries have been greatly reduced.

Also, snowmobile mishaps are on the decline with a 6.1 per cent decrease in accidents.

And to keep the statistics on the decline, new legislation was introduced this year involving all school buses and school-purpose vehicles. They are required to display windshield stickers showing they have been inspected at licensed stations by registered mechanics.

Also, commercial motor vehicles used for transportation and dumping or spreading of construction materials are required to undergo two inspections annually.

New legislation affecting moped drivers and snowmobilers was also introduced. A moped driver is now required to wear an approved motorcycle helmet, while snowmobilers must have a valid motor vehicle driver's licence or special snowmobile driver's permit to operate their machine.

An electronically operated "TOO FAST" sign was installed on the exit ramp from Highway 400 to Highway 401. If a motorist leaves the

ramp too fast, a sign lights up warning him to slow down.

But even with the continued improvement, highway emergencies continue — and these are being aided by a joint OPP and MTC project. Police monitoring of channel 9 on CB radio was inaugurated on Highway 401 between Milton and London and has been extended to the QEW between Port Credit and Burlington.

And for the convenience of all motorists, universally recognized road signs have been erected. Included are new symbol accommodation and travel information signs.

Road signs, particular to Northern Ontario, indicate radio stations providing road and weather information. If successful, this service may be extended to other parts of the province.

In the area of commercial vehicles, MTC has negotiated reciprocal agreements with 13 United States jurisdictions for the recognition of commercial licence plates in these states and Ontario.

Aware of increasing energy costs, a number of different tests are being done by the

Ministry to see if both costs and energy can be reduced.

For instance, a number of highway test sites were selected for a salt-reduction test program without lowering the levels of service and safety. More tests are planned for this winter.

Another energy saving project has been the use of high-pressure sodium luminaries which replace mercury lights which produce more light while using less energy.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year 1977/78, with comparative figures for the preceding year.

	FISCAL YEAR ENDING	
	March 31, 1977	March 31, 1978
Ministry Administration	\$ 26,495,162	\$ 27,139,628
Planning, Research and Development	15,700,665	33,135,710
Safety & Regulation	28,688,117	32,541,010
Provincial Roads	366,720,619	383,344,276
Provincial Transit	35,434,761	56,881,315
Air	1,213,125	2,165,404
Municipal Roads	299,545,792	344,583,236
Municipal Transit	148,124,563	153,522,105
Communication	1,564,096	1,722,356
TOTAL GROSS EXPENDITURE	\$923,486,900	\$1,035,035,040

DEPUTY MINISTER'S OFFICE

STRATEGIC POLICY SECRETARIAT

The purpose of the Secretariat is to support the Minister, Deputy Minister and Strategic Policy Committee on the development of Ministry strategic policy and long-range and annual implementation plans.

In pursuit of these goals, the Secretariat has, during the year under review:

- Managed the processing of business for the Strategic Policy Committee.
- Co-ordinated the application of Rules for the Legislature relating to Statements, Bills, Petitions, Estimates, etc.
- Co-ordinated Ministry responses for briefs and submissions received from associations, the public, and request from government sources for information.
- Conducted or co-ordinated long-range surveys of the sociological, technological and institutional environment and of the expectations of interested parties affected by the Ministry's operations.
- Identified external issues having implications for the Ministry, and undertaken specific strategic issue studies as directed.

During the year, the implementation of the Strategic Policy Development and Planning Process resulted in:

- The first set of Ministry Strategic Guidelines, covering the period 1978-82.
- The Ministry's first Multi-year Plan organized on a program basis.
- Production of a statement of the Ministry's mandate.

- Preparation of a summary of the position and prospects for the Ministry as a whole and for each of its six programs as part of the current strategic planning cycle.
- Assumption by the Program and Resources Planning Committees of increasing responsibility in the areas of evaluation of achievements and long-range implementation planning.

COMMUNICATIONS DIVISION

This division is responsible for ensuring that the diverse interests of the people of Ontario are fully represented in developments associated with radio, television and educational broadcasting, cable and special-purpose video, data transmission systems, telephone and telegraph services and the use of communication satellites.

To this end, the division endeavours to ensure the provision of adequate, efficient and reliable communication services, and the development of strong communication ties within and between communities and regions of the province. In addition, the division supports the planning of communication systems and services responsive to the social, cultural, educational and economic goals of the government.

During the 1977-78 fiscal year, the Communications Division undertook a wide range of activities:

- Provided technical, analytical, and accounting support to the Ontario Telephone Service Commission in its regulatory activities and engineering assistance to the independent telephone companies operating in Ontario.
- Completed, with Bell Canada, the second

phase of a joint project to provide basic, reliable telecommunication services to the remote communities of Northwestern Ontario and proceeded, with the Ontario Northland Transportation Commission, to improve service to communities along the coasts of Hudson and James Bays.

- Participated in a Federal-Provincial Committee which set out a full range of options concerning the introduction of pay television in Canada.
- Supported the improvement of broadcasting and cable services in communities on the north shore of Lake Superior and for the communities east and west of Thunder Bay.
- Put forward representations to the federal Department of Communications regarding the efficient utilization of the frequency spectrum in Ontario.
- Represented Ontario interests in interventions before the Canadian Radio-television and Telecommunications Commission regarding rate increase applications by Bell Canada and Canadian National/Canadian Pacific Telecommunications.
- Put forward representations to the CRTC on such cable and broadcast issues as broadcasting services in Northern Ontario, and the introduction of a multi-lingual television service in the Metropolitan Toronto area.
- Continued negotiations with the federal government to achieve a better balance in the distribution of government responsibilities, particularly regarding cable distribution systems.
- Participated in the Conference of Federal and Provincial Ministers of Communications in Charlottetown, P.E.I., March 29th, 1978.
- Intervened in CRTC hearings concerning the request by CN/CP Telecommunications to interconnect its telecommunication facilities with those of Bell Canada.
- Intervened in CRTC hearings concerning the application by Telesat Canada — Canada's domestic satellite agency — to join the Trans-Canada Telephone System.
- Put forward a position to the CRTC Telecommunications Cost Inquiry examining the accounting practices of regulated common carriers in Canada.
- Put forward to the Restrictive Trade Prac-

tices Commission the Government of Ontario's position supporting continuation of the existing corporate relationship between Bell Canada and Northern Telecom Ltd.

- Put forward a Position Paper to the Federal Minister of Communications concerning Bill C-24, an Act regarding telecommunications in Canada.
- Put forward a representation to the Royal Commission on the Northern Environment (Hartt Commission) regarding telecommunication services in Northern Ontario.
- Completed a series of presentations to other Ministries of the Government identifying policy issues associated with the development of computer/communications.

PRIORITY DEVELOPMENT BRANCH

This branch is responsible for the development and management of current and long-range capital construction programs of the Ministry, and for ensuring maximum effectiveness of the legislated funds to be expended. Long-range programs for proposed transportation systems are developed by a priority methodology which analyses and recommends viable programs within financial and planning period limits.

The Advance Program consisted of 2,666 projects at the end of the fiscal year, including 423 added during the year. Approximately, 1,121 groups of projects had active pre-engineering schedules. During the year, 147 of the 154 contracts advertised were awarded.

OFFICE OF WOMEN'S PROGRAMS

The Office of Women's Programs, part of the Deputy Minister's Office and cost centre, is responsible for the development and implementation of the Ministry's Affirmative Action Program. Staffed by three full-time employees — a Co-ordinator, an Administrative Assistant, and a Program Clerk — the office undertook a wide variety of initiatives during the 1977/78 fiscal year. The highlights of these activities are as follows:

- Responsible for identifying 100 positions throughout the Ministry used for bridging purposes. One position was advertised as a Bridging Position.
- Sponsored an Affirmative Action Unit Representatives' Conference for 70 unit representatives from across the province, and a three-day workshop on Assertiveness Training and Coping with Stress.
- A total of nine MTC Affirmative Action Council meetings were convened. Of these, three were held at Regional headquarters — Northwestern, Northern and Central — with participation of 25 regional employees in one-half day workshops.
- During the fiscal year, the office monitored 12 competitions.
- At the corporate level, the office staff participated in the following corporate task forces — Regional Program Delivery, Quality of Working Life and Public Relations.
- Developed and distributed a brochure entitled "You and Affirmative Action".
- Moderated, and principally organized an Interministerial Regional Information Workshop in Kingston.
- Participated as a full-time member on the Middle Management Staff Committee.
- Participated as a full-time member on the Manpower Administration Committee for the Secretarial Module.
- Instrumental in the participation of three women on two Professional Development Programs (three of 12 participants).
- Provided employee counselling on 41 occasions.
- Participated, in part, in the on-campus recruitment of undergraduate engineers for summer employment.
- Developed a rating form used for candidate evaluation as part of the secretarial module.
- Conducted a survey on women employees' participation in training programs.
- Met with Ministry managers regarding the formulation of branch plans on Affirmative Action.
- Attended the orientation seminar for new employees.
- Participated in three induction seminars for new employees.

- Developed a bi-monthly newsletter for distribution to all female employees.

MANAGEMENT IMPROVEMENT BRANCH

The mandate of this branch, as approved by the Strategic Policy Committee, is to maximize the utilization of the Ministry's resources through improvement of management organization, systems, procedures and practices.

During the past fiscal year, the branch's resources were directed to five major areas:

- Program delivery decentralization.
- Evaluation of the Management Improvement Program.
- Privatization studies.
- Role and mandate documentation.
- Head office reviews.
- Stage IV Management Improvement.

Program delivery decentralization efforts concentrated on regional legal services requirements, finalizing the decentralization of certain Planning Division activities, and a follow-up on the head office aggregates activities.

The results of the Management Improvement Program indicated a saving of \$3.5 million annually is being realized. In addition, permanent and temporary staff has been reduced by approximately 460. Another important result of the review was the identification of unresolved issues.

Several privatization studies were co-ordinated by the branch. In two situations no benefits were identified, while in a third case, economies were projected.

Documentation of organizational mandates and roles was undertaken in the latter half of the year. This is a major co-operative project jointly involving line personnel. A number of statements were processed and approved. Detail analysis is now underway. The documentation produced is essential for organizational and management systems development.

The initial review of a head office unit was undertaken in the latter half of the year. Objectives of this type of review were to identify

opportunities for operational improvements and economies.

Stage IV of the Management Improvement Program Review was completed this year.

Executive approval was obtained for the recommendations for the administrative amalgamation of the regional Engineering and Drivers & Vehicles operations.

PLANNING, RESEARCH AND DEVELOPMENT

PLANNING AND DEVELOPMENT DIVISION

This division is responsible for transportation program development, planning and evaluation, and for management of the Ministry's indirect transportation programs. The present organizational structure was established during 1976 as the result of internal reorganization and the addition of municipal road and municipal transit program management responsibilities. The organization consists of the Municipal/Provincial Transportation Branch, the Urban and Regional Transportation Planning Office, the Economic Policy Office and the Co-ordinator, Intergovernmental Relations.

At the end of the fiscal year, the Municipal/Provincial Transportation Branch was separated from the division to provide a more direct reporting relationship to the Assistant Deputy Minister. This is a trial restructuring which will be assessed in 10 months.

MUNICIPAL/PROVINCIAL TRANSPORTATION BRANCH

This branch is responsible for program planning, management of municipal road, transit and air services programs, program planning for provincial roads and transit programs, and for the administration and development of environmental policies.

The branch comprises five offices: Municipal Roads, Transit, Aviation Services, Provincial Roads Planning and Environmental.

Municipal Roads Office

The Municipal Roads Office is responsible for program development, evaluation and policy, as well as overall budget control for all municipal road subsidy programs.

During the year, 820 municipalities and 39 Indian Reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition, 37 municipalities received subsidies under the Traffic Signal Program. The breakdown was as follows:

Roads and Bridge Section	Road Mileage	Approved Expenditure	Subsidy Paid
Metro Toronto	447.3	\$ 34,494,232	\$ 17,247,116
Regions	3,720.0	86,542,921	48,229,155
Counties	8,040.5	68,131,716	45,779,159
Townships	46,612.6	160,118,136	89,882,833
Urban Municipalities	20,080.7	229,400,350	110,068,033
	78,901.1	\$578,687,355	\$311,206,296
Traffic Signal Section	—	3,461,680	1,730,840

In 1977, the office administered a Connecting Link Program involving 131 projects with a provincial contribution of \$16,970,000. This expenditure includes \$1,200,000 for maintenance in towns and villages.

The Development Road Program consisted of 65 projects, involving an expenditure of \$5,970,000. Usually this expenditure represents 100 per cent of the cost of reconstruction. The road remains under the jurisdiction of the municipality and the work is carried out either on a day labour basis or by means of contract.

During 1977, the Ministry spent \$2,855,000 to provide aid for 210 local Roads Boards, 22

Statute Labour Boards, 32 Indian Reserves and 117 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the province.

A further sum of \$2,160,000 was spent without local participation on the replacement of bridges and on grade improvements involving 151 projects on these roads.

In 1975, 126 large spending local municipalities were identified to undertake roads needs studies as the initial step in establishing a municipal road funding program. In 1977, 54 studies were completed which, when added to those studies completed earlier, gave a total of 114 completed studies. The information was coded into a computer data bank system, and the financial models developed were used to determine 1978 construction and maintenance allocations. This program will be expanded as additional municipalities complete their studies.

Transit Office

The Transit Office is responsible for transit program policy development and evaluation, administration of municipal transit financial assistance programs, development and management of operational improvement demonstration projects and for carrying out, or assisting in, the planning for municipal and provincial transit system improvements.

A total of 61 municipal transit systems received financial assistance. A new method of computing operating assistance for municipal transit systems was applied. The new method introduced the incentive principle to financial performance in relation to revenues and cost, and involved the establishment of financial targets for municipalities of various population group sizes. The percentage subsidy was determined from these targets and applied to total transit operating cost.

At the same time, special assistance was provided to municipalities experiencing above normal population growth rate and to those commissioning major rapid transit facilities. The total operating subsidy paid in 1977 amounted to \$50.4 million. In the same year, a \$26.8 million subsidy was paid to municipalities to cover 75 per cent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, bus passenger shelters, transit terminals and maintenance facilities. The subsidy for the rapid transit construction program amounted to \$67.1 million. This covered 75

per cent of the cost of subway construction in Metropolitan Toronto, with major expenditures allocated to the Spadina Rapid Transit Line.

At a cost of \$4.8 million, 10 operational improvement projects were either in progress or completed during the year. The following projects and tasks of interest have been started or completed by the office during the year:

- Financial and technical assistance for 22 municipalities for bus, rapid transit and related transit operational projects. Assistance to TATO and other agencies was provided for 11 projects.
- Technical and financial assistance was continued for the development of an automated transit communication, monitoring and data collection system, and the development of an automated transit management information system was initiated with the advice of industry.
- The availability of various types of articulated buses was investigated with respect to the procurement of some units for on-site evaluation.
- Five pilot projects were continued in Chatham, Sault Ste. Marie, Toronto, Peterborough and Ottawa to investigate transit services for the physically disabled.
- Funding the development of light rail transit vehicles through the Urban Transit Development Corporation was continued.

Aviation Services Office

This office co-ordinates and administers the Ministry's Air Program activities. Ongoing responsibilities include the development and review of air policies and standards related to the Ministry's air program and the overall administration of this program. The office monitors federal aviation programs and completed a review of the federal standards and criteria used to develop major airports. The office also contributed to a major study of the Toronto Island Airport.

In 1977, improvements were made to 10 of the existing remote airports and the runway was paved at the Pickle Lake airport. Construction of the airport at Kashechewan was substantially completed. Construction equipment was delivered to Bearskin Lake and Webequie during the winter of 1977 in order that construction could begin in 1978.

THE REMOTE AIRPORT PROGRAM AND THE AIR SERVICE (Nor Ontair) PROGRAM



The 11 airports constructed in the remote airport system were maintained for year-round operations at a total cost of \$821,000.

Subsidies amounting to \$850,000 were paid to 13 municipalities to improve municipal airports. Included in this work was the start of the construction of an airport at Hornepayne, and the paving of the airports at Cochrane, Iroquois Falls, and Wawa.

The office monitored the performance of norOntair, administered by the Ontario Northland Transportation Commission.

The office also provided technical support to the Legal Branch during the C.T.C. hearings affecting air services in Ontario.

Provincial Roads Planning Office

This office is responsible for developing, analysing and evaluating that part of the Provincial Roads Program plan that deals with capital improvements.

The basic framework for preparing the improvement plan is transportation systems service, measured throughout the road systems by the application of service standards to identify those deficiencies in the system which are to be removed. Other components of the capital improvement program plan deal with additions to the existing systems, either in response to a specific transportation objective within the Ministry or to objectives of the Provincial Government. This year, improvements and refinements were made by the office to the recently instituted program planning methodology.

Program planning support systems, such as the linear reference system and its components of highway inventory, accident and traffic volume data continued to be managed by the office. Of particular note this year, was the virtual completion of the Linear Highway Reference System development work and the conversion to metric units of measurements.

Special studies of non-routine transportation problems associated with the Provincial Roads program continued to be undertaken by the office.

A further function of the office, which is mainly involved with protecting the integrity of provincial road corridors, continued to develop policy on corridor control matters and review

various land development plans and proposals referred to the Ministry by the Ministry of Housing.

A significant output of the office this year was a public document on land severance and related corridor control practices classifying the Ministry's road systems according to the degree of private access control the Ministry wishes to achieve to maintain an appropriate level of safety and efficiency of through traffic movements.

Environmental Office

The Environmental Office is responsible for the development of technical and administrative policy for natural and cultural environmental matters related to all Ministry programs. Liaison is carried out with the Regional Environmental Units in Downsview, London, Kingston, North Bay and Thunder Bay.

With respect to the Environmental Assessment Act, 1975, two class environmental assessments have been prepared for work on provincial roads. These were submitted to the Minister of the Environment for review and approval. Three additional class assessments have been prepared in draft form. This work was done with the assistance of the MTC Environmental Assessment Steering Committee, made up of representatives of offices associated with the Provincial Roads program.

The monitoring of the cost-effectiveness of environmental specifications in design and construction continued and a series of seminars were held with Ministry operational staff to provide training in environmental sensitivity and awareness.

During 1977-78, liaison continued with the Toronto Area Transit Operating Authority, and the Ministry of Northern Affairs with respect to the requirements of the Environmental Assessment Act for their transportation programs.

Advances were also made in the development and refinement of erosion prediction techniques and freeway noise barrier policy.

Urban and Regional Transportation Planning Office

This office is responsible for ensuring the availability of up-to-date, long-range, multi-modal transportation planning information as required for strategic policy decisions, program planning,

and program delivery activities. Typical major office activities in the past year included:

- Provision of travel forecasts for provincial highway and GO transit planning.
- Provision of technical and financial assistance to Metropolitan Toronto and other municipalities in the preparation of the transportation components of their official plan.
- Co-ordination of provincial and municipal transportation planning efforts by conducting seminars, work shops and developing joint programs.
- Conducting special studies to address transportation energy concerns.
- Staff background studies on factors external to the Ministry such as changing demographics and energy considerations.
- Significant progress related to the Federal/Provincial Southern Ontario Multi-Modal Passenger Studies.
- Numerous systems planning studies as input to planning for the provincial highway program.
- Provision of planning expertise and analysis in assisting the Ministry of Northern Affairs for program delivery in Northern Ontario.

Economic Policy Office

This office provides economic expertise within the Ministry. The major work undertaken by the three office sections during the past year is outlined below:

The Modal Studies Section completed a study on the probable impact of toll increases on the St. Lawrence Seaway and Welland Canal. Continued involvement with the transportation modes included input to the proposed federal ports legislation, comments on the status of pilotage in Canada, completion of involvement in the TDC, RTAC Study of Reciprocity in Commercial Motor Vehicle Licensing, as well as continued efforts to improve the statistical data base through a Federal-Provincial Committee. Research has been completed for the Vehicle Length Study which assisted legislation. Developments in the small-parcel-movement industry were monitored.

Liaison is continuing with private corporations to effect the implementation of a Lake Ontario roll-on/roll-off ferry service. In addition, the office

is actively engaged in the development of Ontario's position vis-a-vis rail passenger services.

At the recommendation of the Ontario Select Committee on the Transportation of Goods, a major study has been initiated to determine the effects of regulation and reciprocity on the efficiency of the Ontario trucking industry.

The Pelee Island Ferry Passenger Survey, and an impact study on the movement of goods through the St. Mary's River as a consequence of closing the Canadian lock at Sault St. Marie have both been completed. In conjunction with the Ministry of Natural Resources, the Mineral Aggregates Transportation Study has been initiated. Work is continuing jointly with other provinces on the revision of the Rail Costing Order.

The Transportation Pricing Studies Section continued to provide the Physical Distribution Services to small industry. Major efforts were concentrated on companies in the export market, and relocation studies became more prevalent. New companies were also highlighted. Thirty companies received a complete analysis, with 25 others receiving specific items of information.

The Physical Distribution Newsletter continued with 10 issues. Circulation grew by 100 in 1977 to over 6,000.

Assistance was given to the Program Development Branch of Drivers and Vehicles for the development of a uniform bill of lading. This was completed in early 1978.

During the past year, major efforts of the Market Studies and Forecasting Section focussed on the development of economic assessment criteria, (i.e. employment creation) for the main Ministry capital programs. A report was completed on the freight transportation requirements of manufacturing firms within Ontario. Another report, dealing with the impact of MTC cutbacks on the roadbuilding industry, was presented to the Ontario Roadbuilding Association. The section also provided the Ministry's senior management with periodic updates on the economic outlook for Ontario.

Co-ordinator, Intergovernmental Relations

The Ministry necessarily has a wide range of contacts with the transportation agencies of other governments and the transportation

industry in developing and administering transportation policy.

The Co-ordinator's position was established to help ensure that such contacts and regular dealings are consistent and appropriately reflect the views of the government with respect to intergovernmental relations generally. This requires fundamental work within the Ministry and regular contact with officials of the Ministry of Treasury, Economics and Intergovernmental Affairs, and with the transportation agencies of other provincial and federal governments.

Given the current emphasis by all senior governments to co-operate, to reduce bureaucratic red tape and to clarify relative roles and responsibilities of the federal and provincial governments in areas of common involvement, this function retains a high priority within the Ministry.

The perception across Canada is that transportation is a key element in national economic recovery, influencing as it does every sector of economic enterprise and major regional development programs. This perception lends further importance to the Ministry's efforts to contribute to appropriate national policy making and administration in transportation, and in so doing, to recognize the need for clear, direct lines of accountability of our transportation institution to the Canadian public.

RESEARCH AND DEVELOPMENT DIVISION

The Research and Development Division is comprised of four units: Executive Area; Engineering Research and Development Branch; Systems Research and Development Branch; and the Management, Information and Testing Systems Unit.

Executive Area

This group provides control of the division's administrative needs including the budget, manpower planning, the Ontario Joint Transportation and Communications Research Programs, and the Quarterly Project Progress Report.

ENGINEERING RESEARCH AND DEVELOPMENT BRANCH

This branch conducts research and development to improve the physical attributes of high-

ways — pavement, bridges and other highway structures, and materials and quality assurance.

The branch also investigates load-related problems arising from the regulation of commercial vehicles on the highways; undertakes pavement safety and environment-oriented research; conducts cost-effectiveness studies to determine the future cost implications of engineering decisions; and co-ordinates the Ministry's metric conversion program.

Pavement Research and Development

Pavement research engineers develop better design methods for predicting pavement behaviour and performance; improved ways of evaluating load capacity and load-imposed damage; techniques for protecting pavements from environmental effects; and means of predicting and planning more effective rehabilitation and maintenance. In the last year:

- A new design weigh-in-motion scale was installed in the pavement on Highway 401 near Whitby. The scale, designed to provide continuous data on the weights of trucks and axles, is currently being tested in Saskatchewan, Ontario, Quebec and New Brunswick. The tests are scheduled to be completed in 1979.
- The first model of a new type of pavement siding quality meter, believed to be suitable for conducting mass inventory surveys, underwent initial trials. The roughometer has several advantages over earlier types, such as automatic data collection designed as a computer compatible package, valid results over a range of normal highway speeds, and insensitivity to the vehicle in which it is mounted and to changes in its suspension system due to aging.
- A program of frost penetration measurements in highways was completed. A relationship was established from these measurements between frost penetration and degree days of frost at any location in the province. The capability to predict frost penetration reduces the risk of frost damage to properly designed structures.
- The capability of the Ontario Pavement Analysis of Costs (OPAC) Design System was extended to cover a wider range of pavement cross sections, including partial paved shoulder sections. OPAC 3, the newest system, calculates highway user costs as well as the highway agency construction

and maintenance costs. Requests for distribution of the OPAC program are presently under consideration.

- Consideration of protection for pavement structures against undue damage from heavily-loaded vehicles was a continuing feature during the reformulation of the Ontario Bridge Formula into new vehicle and axle weight regulations. The new regulations, now in metric units, are easier to understand.

Structural Research

This office undertakes research to improve the design, performance and load capacity evaluation of highway bridges; it also develops methods of improving and rehabilitating existing bridges.

The Ontario Highway Bridge Design Code, initiated about two years ago, is nearing completion. It is expected to be published in October 1978.

The office also provided the technical basis for the new Highway Traffic Act regarding permissible weights for commercial vehicles, and developed a new method for rehabilitating deteriorated laminated timber bridges in the province. This method, involving the post tensioning of timber decks, was successfully applied to one bridge two years ago.

Research Report 214 on Vehicle Weight Regulations has prompted several important decisions by the Roads and Transportation Association of Canada, and should encourage the development of uniform axle weight regulations across Canada.

Three concrete decks conforming to specifications of the forthcoming Bridge Code have been constructed, resulting in a 50 per cent saving of reinforcing steel. Tests on these bridges indicate satisfactory performance.

The bridge testing program, as usual, was a success, yielding valuable information which can be used to realistically evaluate structurally suspect bridges.

The quality of research is reflected by the fact that 10 per cent of the papers presented at one of the most important bridge engineering conferences of this decade, the TRB Conference at Missouri in September 1978, are by this office.

Materials and Quality Assurance Section

Research in this office is conducted to study the physical properties, behaviour and in-service performance of construction materials and to improve their use in pavements and structures by developing better construction and maintenance systems.

In the past year, there have been a number of significant developments in the field of bridge deck restoration. A systematic method of investigating the condition of existing bridge decks using newly developed techniques has been implemented. And, a highly innovative technique of determining the condition of bridge decks using airborne infrared photography is in the development stage.

Cathodic protection or various types of concrete overlay has also been applied to badly deteriorated bridge decks. It has resulted in the successful restoration of bridge decks which formerly would have required replacement.

Further development work on open graded bituminous mixes and its large scale use on the Toronto By-Pass portion of Highway 401 has led to the adoption of such mixes as a standard treatment for future paving work on urban free-ways. Important properties of open graded bituminous pavement include high skid resistance under normal driving conditions and significantly lower noise levels than most conventional pavements.

Research work on the occurrence of wet pavement accidents, which account for approximately 25 per cent of all accidents, indicate a significant proportion occur on a very small fraction of the highway system. This important finding means that programs to reduce pavement skidding accidents can be concentrated on the so-called "black-spot" locations at a relatively low cost.

In conjunction with a Ministry-wide Task Force, a review of construction quality assurance practices was completed. The recommendations of the study are now being implemented which should, in the long term, lead to lower highway maintenance costs, less inconvenience and delay to motorists and smoother riding, longer lasting roads.

Earth and Environment Research

This office conducts research to improve knowledge and techniques for using earth resources in highway building and to minimize natural or man-made impacts on the highway user or environment from highway construction, maintenance or operation.

Research engineers develop means of minimizing adverse effects of erosion, scour and silting; improve practices for weather-dependent maintenance and operations; and techniques for measuring environmental impacts. Work projects last year included:

- The continued surveillance of the environmental effects from the construction of highway facilities in southern and northern terrains by remote sensing methods.
- A salt study in the town of Ballantrae on Highway 48, to monitor the effect of winter salting operations on the groundwater and local wells affected by salt over the past few years. Although sampling of the well-points was carried out during the winter to monitor the chloride ion concentration changes, the project will have to be carried on for an additional two to three years to get meaningful results.
- The establishment of experimental, natural vegetation plots adjacent to highways in various parts of the province. By allowing natural regeneration in the highway roadway, it is expected that the Ministry will be able to reduce maintenance costs and increase aesthetic values at the same time. The plots have been monitored and initial results indicate direct seeding results are disappointing compared to natural regeneration.

Technology Resources

Technology Resources undertakes special projects involving advanced applications of physical, chemical and electrical processes. It also develops and demonstrates special construction and maintenance techniques.

Projects this year involved an investigation into the possible uses of waste materials, including sulfur — a product resulting from the desulfurization of petroleum products and natural gas. It is possible to use this product in constructing asphaltic concrete roads to replace scarce and expensive asphalt cement. The sulfur permits

the use of a lower viscosity asphalt cement, resulting in better low-temperature crack resistance of our roads.

Cathodic protection of reinforcing steel in concrete bridge decks has also been investigated, developed and is now a method for regular field application. Four bridge decks will be repaired and protected by this method this year.

Methods for protecting post tensioning cables in bridge decks are currently being studied on a laboratory scale.

Value Engineering

Value Engineering supports the Ministry's programing and policy planning functions and other research and development programs.

Research engineers develop engineering systems, computerized or otherwise, to obtain optimum solutions at project design level; develop investment packages to obtain maximum economic returns on a network level; and develop predictive relationships and factual data for making sound engineering and cost-related management decisions. They also devise ways of increasing efficiency in routine engineering procedures and, where applicable, incorporate economic and value engineering analyses in existing and planned research and development programs.

Priority Analysis of Rehabilitation Strategies (PARS), a project aimed at developing priority and financial planning methods for rehabilitation and maintenance of Ontario's highway system, and various alternative methods, their relative performances and economic implications are under investigation.

The OPAC pavement design system is being upgraded.

Research to produce predictive relationships is exemplified by the Ontario Freight Model, an examination of why, what and how commodities move in the province.

Other studies include indentifying rehabilitation strategies for Toronto's Highway 401 Bypass; studying the effectiveness of recycling old highway pavements; analyzing present highway design standards; and developing measures of highway service.

Metric Office

The Metric Office has essentially achieved its mandate — to provide a planned and efficiently-managed program for metric conversion of all measurement sensitive MTC activities. MTC conversion has been in step with Canada's national target dates and resulting conversion activities in the relevant public and private sectors.

The office has played a large and successful role in developing metric conversion activities between transportation and communications authorities in all other jurisdictions across Canada, including detailed and timely guidance, advice, support, encouragement and instruction to Ontario municipalities.

Major achievements during the last year were:

- The strategic and tactical management, technical support, guidance, assurance and back-up for the implementation of metric conversion on Ontario Highways. This high visibility, public impact activity was concluded with almost no negative effect or public response directly attributable to the MTC program.
- A similar successful effort in implementing metric conversion of vehicle related legislation.
- The conclusion of a well-accepted, successful training program designed and delivered by Metric Office staff, in conjunction with teachers trained earlier to deliver the secretarial/clerical training package to provide sufficient metric instructors (100) for all divisions in the Ministry requiring such services.
- A training program which continues to be presented to secretarial/clerical staff with great success and wide recognition. Other Ministries and agencies of the Ontario Government road authorities and private enterprise have adopted the program.
- Participation in the National Standards Program by providing representative technical Ontario Government input to National Standards within the sphere of competence of Metric Office staff. This activity has resulted in some National Standards, including metric paper sizes, scale ratios for maps and plans, drafting tools, and linear measuring devices including those for surveying.

- Presentations of metric related general and technical up-to-date information for associations or organizations which normally interact with, or are supported by MTC. Similar more general information was provided to service organizations on a selective basis, including the Roads and Transportation Association of Canada, numerous Ontario municipalities, the American Right-of-Way Association, the C.S. Anderson Road School and the Municipal Technician Training School.

SYSTEMS RESEARCH AND DEVELOPMENT BRANCH

The responsibility of this branch is to provide systems research, development and implementation in new areas of transportation technology, improved methods of operation and operational standards.

The branch consists of the following program areas: transit systems; transportation energy management; automotive vehicle energy management; transportation systems management and control; commercial vehicle operations and safety; human, social and economic research; highway wayside equipment research; and acoustics research.

Transportation Systems Management and Control

Studies are carried out in this office to optimize traffic flow by developing efficient traffic control systems and develop command and control systems for rail transit vehicles.

Significant progress has been made since 1974 in furthering the maximum use of existing transportation resources. The development and implementation of a computerized freeway surveillance and control system for the Queen Elizabeth Way was successfully completed during this period. The system provides co-ordinated ramp metering control over a four-mile section of the freeway, and includes automatic incident detection and computer-generated graphic displays. Studies are underway to investigate the possible application of similar techniques to other freeways in the Toronto area. Traffic flow simulation models have been developed to support these studies.

The Municipal Traffic Control System research project, designed to determine the feasibility of utilizing computerized traffic control in mid-sized and smaller Ontario municipalities, is well underway. Comprehensive surveys have been under-

taken to determine municipal requirements and information on commercially-available traffic control systems. As part of this effort, a joint research project with the Federal Ministry of Transport has been completed to study the cost-effectiveness of actuated signals in arterial traffic control systems.

Other projects completed include a study of a tunnel incident detection and warning system and a study of the application of microprocessors to real-time traffic control systems. A comprehensive state-of-the-art report on rail transit command and control systems was also completed. Support is being provided to the Transit Systems group for their review of the UTDC ICTS system.

Human, Social and Economic Research

This office conducts highway safety studies, investigates the impact of transportation systems on public attitudes and life styles, and develops educational programs.

In highway safety studies, researchers investigate various human elements of driver/vehicle safety such as seat belt usage and the effects of alcohol on driving, and develops educational programs to achieve acceptance and implementation of safe practices by the driving public.

The seat belt program consisted of continued monitoring of the effectiveness of the legislation. Roadside surveys provided province-wide measures of belt use and public attitude toward seat belts and the legislation. Additionally, an independent measure of belt use on expressways was obtained using "observational" methodology. A survey of police attitudes towards seat belts was also undertaken.

The effectiveness of the Traffic Tribunal system and its driver improvement component is also under study. Summaries of driving records of persons convicted of traffic offences at the tribunal are the criteria being used for measuring effectiveness.

A joint MTC-MOH study, evaluating the correlation between a reduction in health care costs with the introduction of seat belt and speed limit legislation, has been completed and the report released.

In the drinking-driving program, Grade 9 and 10 students, driver education students, and commercial driving school students were surveyed to determine their knowledge, attitudes, reported

behaviour and interests. Teachers of these three groups were also surveyed to determine the type of materials that would be of most use to them. The surveys revealed a need for a group of films related to drinking-driving with supporting materials. The production of these films has been initiated.

In addition, a preliminary evaluation of the comparative effectiveness of different road dust treatments has been conducted with the Ministry of the Environment, and an economic model for cost-effective highway and street-lighting design has been developed.

Research continued into ways to improve public acceptance of transit. This included reports on the readability and utility of transit route maps in medium-sized cities, public reaction to bus destination signs, and the results of an experiment in which auto commuters tried using transit for commuting.

As part of the program to reduce energy consumption, before and after surveys were conducted in residential and commercial areas to determine public acceptability of energy efficient, high pressure, street lighting.

As part of the TEMP program, this office provided the major design and implementation of the SHARE-A-RIDE carpooling project implemented in January at the Downsview complex. Background studies were also undertaken to prepare for a car and vanpooling demonstration with industry, including the preparation of a manual to assist companies to start their own vanpooling programs.

Commercial Vehicle Operations and Safety

This office conducts research to investigate the operation and safety of articulated vehicles (hitched or trailer/vehicle combinations).

The major effort of this office was devoted to the completion of the jackknife control research initiated in the latter part of 1976. This project was jointly funded by the Transportation Research and Development Center, Transport Canada. Several hundred jackknife tests were conducted at the Huron Park facility completing the test phase of the program.

A computer simulation, including the jackknife control devices, was developed and validated as part of this program. The analysis and evaluation of these devices is continuing and nearing completion.

The doubles simulation for evaluating the stability and dynamic performance of tractor semi-trailer and pup-trailer combinations has been completed and is being documented.

The driver model developed last year is now being experimentally validated by the University of Toronto Institute of Aerospace Studies and will continue throughout 1978.

The braking decelerometer, developed to test the braking performance of commercial vehicles while in operation, has undergone a preliminary in-use testing with the vehicle inspector and will continue to be used to gather data during 1978.

The vehicle test program for 1978 has been prepared and includes the comparison of wide-base radials with dual radials and bias ply tires for stability control and maneuverability as well as fuel economy and pavement damage.

Also included in this test program is the evaluation of self-steering axles for semi-trailer combinations, some pup-trailer configurations and antilock brake systems. The extent of these projects will depend on a number of test-related factors, including test conditions and weather.

Highway Wayside Equipment Research

Research to develop better equipment for improved highway and roadside safety is undertaken by this office.

In the field of safety improvements, the development of two prototypes of sign truck crash barriers has been completed. Publication of the designs in the United States through the Transportation Research Board resulted in many inquiries, indicating the barriers may be a marketable product.

The designs will be dynamically tested early this year. The crash barriers, when adopted and introduced by the Ministry as operational standards, will reduce the hazard of sign trucks at the beginning of lanes temporarily closed for maintenance work.

Research on performance and life cycle cost analysis of city street and roadway lighting has gained importance because of the need for saving energy. Last year's city street lighting demonstration project will be extended this year into a project on outdoor lighting management, jointly sponsored and funded by the Ministry of

Energy and Ontario Hydro. This project will establish guidance for energy saving outdoor lighting technology.

Transportation Energy Management

This program manages and co-ordinates the Ministry's Transportation Energy Management Program (TEMP). TEMP is a joint MTC/Ministry of Energy demonstration and study program aimed at maintaining Ontario's quality of life.

Work within this area involves the program definition of TEMP, the establishment of goals and review of broad policy options, the co-ordination of research and study activities within several groups, monitoring and preparing periodic reports to management.

Support studies aimed at assessing public acceptance of transportation energy conservation, the assessment of social and technological developments upon the transportation energy future, and the co-ordination of the program with other government agencies and the private sector have also been undertaken.

Automotive Vehicle Energy Management

Automotive Vehicle Energy Management undertakes research aimed at the conservation of energy in automotive use, in conjunction with the Ministry of Energy.

Technical investigations under this program, and concurrently, under the Transportation Energy Management Program (TEMP) were carried out by research engineers in two main directions — alternative fuels to augment fuel supplies, and fuel economy measures to reduce the rate of consumption of available petroleum fuels.

These studies will be used to supply information regarding effective conservation measures to the Ontario public, vehicle fleet operators and government bodies within and outside the province.

In furthering the role of the group and its ability to perform research and the necessary testing for independent verification of results, a road test facility is being adapted and a chassis dynamometer test facility is being constructed. The latter will permit constant volume sampling, emissions analysis capability, and a limited capability for environmental simulation.

In addition, instrumentation packages are being developed for on-road vehicle research and for commercial fleet operator type usage.

Acoustics Research

This office studies transportation noise problems, undertaking research into how sound and vibration are generated and propagated in order to develop ways of diminishing them.

In the past, barriers erected to reduce noise levels on properties along expressways have shown limited success. Acoustics researchers are now utilizing a model facility to provide a basis for improved prediction of barrier performance and lead to better design and proper placement of efficient, effective noise barriers. Computer methods are also used by the office to determine the benefit/cost of a number of alternative possibilities for locating sites for noise barriers on Ontario freeways.

Other acoustics research includes measurement of pavement-tire noise in order to support the development of improved surfaces with low noise properties, and the development of a means to reduce noise on high-rise balconies near freeways.

The office also acts as a source of expert counsel on acoustics matters, such as the development of highway noise standards.

Transit Systems Research and Development

The Transit Systems Research and Development Office conducts research to identify needed improvements and developments in transit planning, operations and technology, and develops state-of-the-art studies, systems and technologies to meet the demand.

During the year, work continued on the development of a transit demand model for planning of transit operations, and a study was undertaken of the effect of fare and service levels on transit ridership in Ontario municipalities.

A review was made of operating and scheduling problems in transit services for the handicapped, and a plan initiated to address these problems.

Paratransit work continued in the planning of two demonstration car and vanpooling projects, one at the Ministry offices at Downsview, the other with several large private employers in the Metropolitan Toronto area. As car and van-

pooling have potential for reducing energy consumption, as well as making better use of existing road facilities, these projects support the Transportation Energy Management Program (TEMP).

Studies were also initiated on a comparison of alternative transit modes to develop guidelines on their most suitable applications.

Mechanical engineering projects continued on railway noise and truck dynamics. Further design and experimental work was conducted for a wheel/rail interaction simulator. Experimental studies of rail vehicle noise and of TTC rail vehicle truck performance were conducted. A set of advanced design resilient steel wheels was purchased for testing on a TTC streetcar.

In addition, research staff worked closely with the Ministry's Equipment Office and regional staff to improve the design and operation of underwater air bubbling systems in the Kingston area to maintain open channels for winter ferry operation.

Infrastructure activities continued on transit vehicle curving dynamics, vehicle interaction and participation in Bridge Code preparation.

Electrical research activities included initiation of a review of alternative electrical propulsion systems for transit and the updating and monitoring of electric vehicles. An assessment of provincial electrical energy demands for various levels of electric vehicle use was initiated as part of TEMP. A review of likely impacts of small, urban cars on energy consumption was also undertaken for TEMP.

Work continues on the assessment of transit maintenance techniques, in particular those with potential for cost reduction. Transit system reliability studies also continue.

Staff worked closely with the Transit Office and Ontario transit properties on planning of the Ministry's articulated bus demonstration project and on a study of the feasibility of honour fare systems in Ontario. Together with Human and Social Factors Research, a study of passenger reaction and technology of bus destination signs was undertaken.

And finally, work continued on the assessment and monitoring of intermediate capacity transit system development being undertaken by the Urban Transportation Development Corporation. Expert consultation was also provided to

UTDC in the areas of guideway design, transit vehicle truck performance, wheel/rail noise, propulsion system design and testing, reliability, and guideway and system testing.

Management, Information and Testing

This office has developed a project management system that provides division management with a more effective means of monitoring and evaluating its projects and programs, and continues to maintain a state-of-the-art knowledge of the computer software and hardware development to ensure that the division has these facilities available for its needs in the most economical way.

Testing Facilities and Equipment Management

This group ensures that all specialized testing needs are met, specifically test sites, specialized test equipment, motor vehicles, and other equipment such as dynamometers, etc.

During the year, testing continued at Huron Industrial Park, Centralia, Ontario. A fully irrigated, low friction surfaced skid pad is used to evaluate anti-jackknife devices.

Testing and Instrumentation

This laboratory acts in a support role to the various project groups in the division and provides

instrumentation together with technicians to install and operate the instruments for experimental programs.

Engineering support is also made available to assist in planning test programs, conducting tests and reporting results.

The major projects presently using the assistance of the laboratory are:

- Bridge testing.
- Articulated vehicle research.
- Curved rail load/deflection and dynamic tests.
- TTC vehicle and truck dynamic tests.
- Design and installation of a vehicle chassis dynamometer facility.
- Noise and vibration characteristics of subway wheels.
- Noise measuring and analyzing projects in the areas of environmental studies, and noise barrier assessment.

Technical Publishing

The divisional requirements for technical editing, graphic design and publishing are provided by this group.

OPERATIONS

HIGHWAY ENGINEERING DIVISION

The Highway Engineering Division is responsible for the development of highway engineering and survey policies, procedures, and standards in the fields of design, construction, maintenance, traffic engineering, engineering materials, structures and surveys.

The division is also responsible for providing a design service for structures, structure foundations, electrical installations and major landscape work.

The division consists of two branches, Design and Construction and Maintenance, and three offices, Engineering and Materials, Structural, and Surveys and Plans.

Engineering Materials Office

This office is responsible for the development of effective methods of using various engineering materials in highway construction and maintenance, and for means of ensuring the quality of such materials as they are incorporated into the various works created by the Ministry.

Materials and Laboratory Services Section

This section is mainly concerned with the testing, inspection and evaluation of materials and products related to soils, aggregates, asphalt, concrete, metals and chemicals and also products purchased for general operational purposes.

During the past year, initiatives continued in the following areas:

- Further decentralization of activities.
- Evaluation of reflectorized licence plates.
- Evaluation of various types of noise barrier materials.

- Partial replacement of portland cement by cement made from a waste product, blast furnace slag.

Pavement Design and Management Section

During this fiscal year, two major organizational changes occurred within the Pavement Design and Management Section. Decentralization of several functions of the Aggregate Unit took place with a reduction in staff to five, who are responsible for carrying out the Head Office functions related to setting policies, monitoring Regional Aggregate Sources Lists, providing technical advice and guidance. The Quality Assurance (Soils) Unit with its staff of five was transferred to this section.

The Pavement Management Unit monitored 168 Regional Soils Design Reports, 103 Soils Profiles, assisted in the processing of seven Pavement Selection Reports through the Pavement Advisory Committee, and contributed design and contract information to PAMFIS on approximately 300 projects. Interim reports were prepared on improving pavement drainage using plastic pipe subdrains and the use of a Petromat fabric to reinforce bituminous overlays.

The Aggregate Unit prepared 20 Aggregate Evaluation Reports for the Ministry of Natural Resources, commented on 22 Municipal Official Plans and assisted the regional staff by preparing 35 Aggregate Sources Lists. This Unit, as part of its Head Office mandate, also monitored 103 Aggregate Sources Lists prepared by the regional staff.

The Geology Unit carried out two field studies, one into the performance of Cayuga aggregates in bridge decks; the other on the performance of borderline quality aggregates in bituminous pavements in the Orillia area. This unit also assisted in the assessment and approval of 15 new designated aggregate sources.

The Quality Assurance (Soils) Unit, in co-operation with the regional Quality Assurance staff, prepared a Quality Assurance Plan to be completed for each contract during the upcoming construction season. Approximately 15,000 compaction checks taken by regional construction staff were monitored and reviewed. This unit also prepared technical publications on the use of filter fabrics and special provisions on controlled wall blasting and filter fabrics. Several courses were held for the training of regional staff in the use and care of nuclear density and moisture equipment. Currently, 38 units are calibrated and maintained at Downsview for regional use.

Soil Mechanics Section

The section carried out foundation investigations at 84 sites throughout Ontario and prepared 82 Foundation Investigation and Design Reports. Of these reports, 11 were for municipal projects. In addition, four other Ministry projects were investigated and reported on by consultants. Over 150 preliminary and final structural designs were reviewed and 80 foundation investigation reports were prepared for inclusion in 34 separate contracts. Aid and advice on design and construction aspects was provided to municipalities for 26 projects where foundation problems had occurred.

Pile load tests were initiated and performed at three different sites. This resulted in significant savings on structure contracts where design loads were increased by 50 per cent above normal practice. The validity of Wave Equation Analyses methods of assessing pile capacities was investigated during the testing program.

A new method of payment for diamond tool usage on boring contracts on a per foot basis was introduced, and resulted in a savings of 65 per cent compared with previous years. A payment method for drilling and sampling in overburden on a per foot basis has been developed for boring contracts commencing May 1, 1978.

Some staff members were invited to give lectures at universities and colleges on the subject of soil mechanics and foundation engineering.

The total expenditure for the year was \$569,000, down 14 per cent from last years expenditure of \$660,000.

Structural Office

The re-organization of this office has been completed to combine design and control functions covering construction and maintenance. The Approvals Section now reviews both municipal and Ministry structures. All structural services are provided by four sections, each working within a region and having close ties with regional offices. A net reduction in staff and overheads was achieved.

The Structural Office completed the design and contract documents for 58 bridges in-house and supervised the design of 24 bridges by consulting engineers for a total of 82 major structures for the year. Plans and contract documents were also completed for 11 special design culverts, 12 overhead sign support structures and seven buildings. The first cast-in-place concrete segmental bridge was designed this year for the Arnprior Bypass across the Madawaska River. A centre span of 400 feet was required. An alternative design in structural steel will be tendered for competitive bidding.

The Approvals Section approved 126 preliminary structure proposals, 213 final structure designs, 166 culverts and 43 miscellaneous structures. Inspections of 287 municipal structures were carried out and 236 by-laws were reviewed and approved. Detailed evaluations were completed and reports issued for 11 structures.

A detailed, comprehensive structural inventory data bank known as OSIS is being compiled to include all bridges in the province. To date, over 10,000 structures are included.

The office has also played a major role in the preparation of the new Ontario Bridge Design Code.

Surveys and Plans Office

This office develops policies and procedures for engineering and legal surveys, plan preparation and registration, cartography, photogrammetry and remote sensing.

The 1978/79 revision of the Official Road Map and the new Airport Facilities Map were completed. Three of the County Lithograph Map Series 1:250,000 were completed with two more near completion. A computer data base was developed and put into use to assist in the recording and retrieving of settlement data required for

map compilation. A variety of cartographic services were provided to the Ministry and other government agencies on a demand basis.

The Aerial Survey Section delivered 152 plans at various scales and 175 individual model sheets at large scale for the Engineering and Title Record Plan Process. These plans and sheets consisted of 13,830 acres of large scale, 86,400 acres at medium scale and 66,000 acres at small scale, utilizing 918.4 km (574 line miles) of photography. Also taken were 70.4 km (44 miles) of preliminary cross-sections. For non-mapping purposes, 25 vertical photography projects 1,464 km (915 line miles) were flown, as were 21 oblique photographic projects.

The Remote Sensing Section completed the first set of standards and procedures, and continued the monitoring of program delivery processes and the provision of professional consultation services to the regions, head office and others. The study of the various environmental parameters for a test site along Highway 402 was continued as part of a project entitled: The Surveillance and Prediction by Remote Sensing of the Environmental Effects of a New Highway Facility. A special viewer for multi-spectral photography was evaluated for possible use by the Ministry. Investigations were completed on pavement distress features and continued on the instability problems of the Rous Lake gravel pit and dual channel infrared imageries. The Second Annual Remote Sensing Conference was organized. Three presentations and two one-week seminars on Remote Sensing Applications were held. The section also provided aerial photographic mosaics and Image Library services to the Ministry and others. Altogether, 853 m² of mosaics and sepiaflexes were compiled and 1,695 requests for the Image Library service were processed.

The Surveys Section evaluated an additional 425 horizontal control survey monuments on the Ontario Co-ordinate system and established 351 precise bench marks. During the year, 1,551 plans were examined by this office. In addition, 127.9 km (79.92 miles) of highway were designated as controlled access highways, bringing the total mileage of such highways to 5,858.1 km (3661.34 miles). The extensive training program was continued and in surveying and drafting, 77 candidates tried qualifying exams and 41 passed.

DESIGN AND CONSTRUCTION BRANCH

This branch is responsible for the development and improvement of policies, procedures, specifications and standards relating to the design and construction of highways and related facilities. The branch consists of four offices: Highway Design, Specifications & Standards, Contract Preparation & Control and Contract Management.

Following are a few of the many projects undertaken:

Southwestern Region — Chatham, London, Stratford and Owen Sound Districts

On Highway 402, Sarnia to London, granular base and paving was completed on the section from Highway 7 westerly to 0.9 km (0.6 miles) west of County Road 26 (23.2 km) (14.5 miles). A further contract was awarded for granular base and paving from 0.9 km (0.6 miles) west of County Road 26 westerly to 1.9 km (1.2 miles) west of Modeland Road at Sarnia (10.6 km) (6.6 miles).

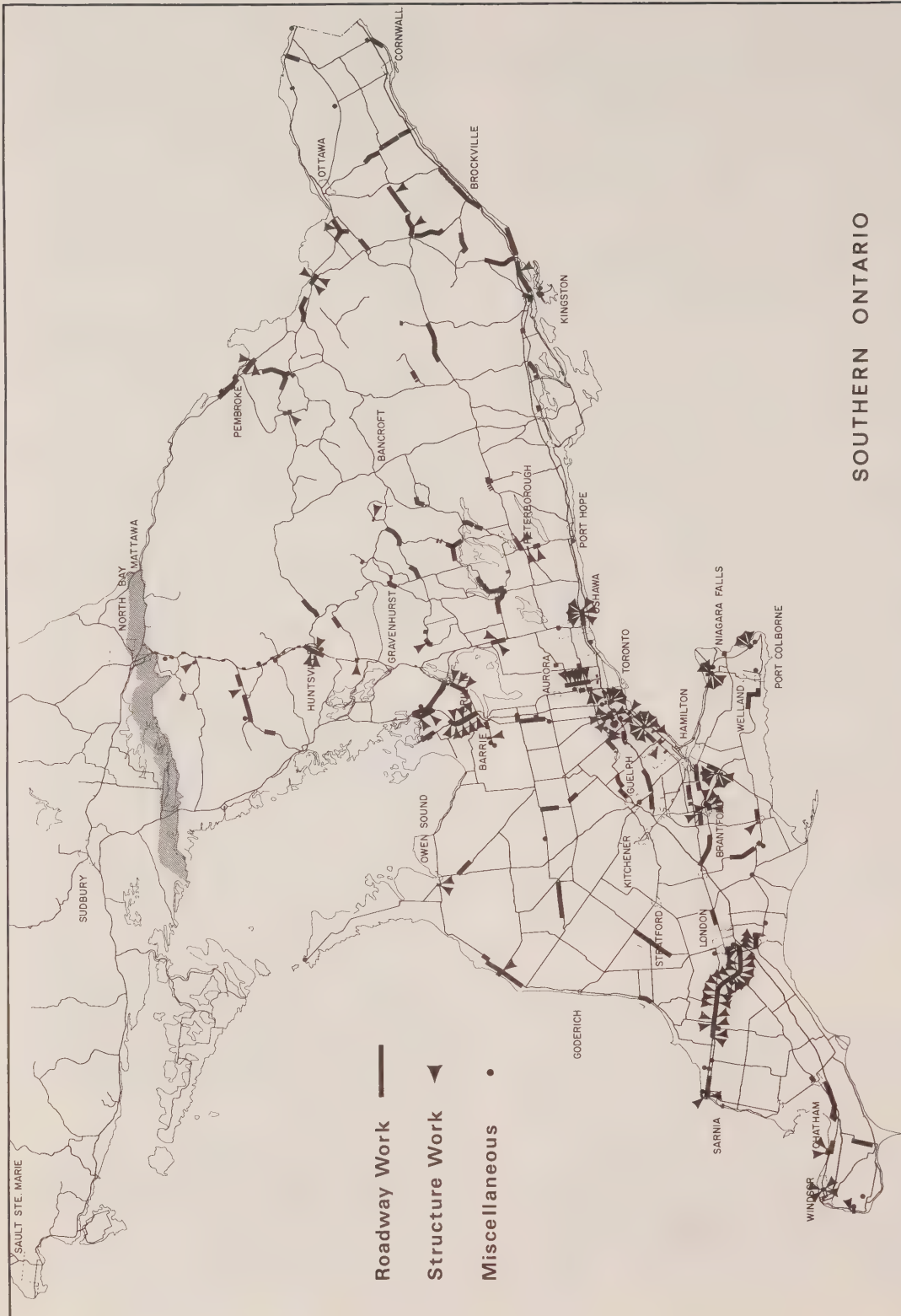
Work continued on the grading of Highway 402 from Highway 7 easterly to Highway 81 north of Strathroy, and a number of structures were completed in this 27.2 km (17.0 mile) section.

A contract for grading, drainage and five structures was awarded for Highway 402 from Highway 401, west of London, northerly for 9.6 km (6.0 miles). This contract also provided for the relocation of 3.2 km (2.0 miles) of township roads.

Also awarded was a contract for the construction of two Vehicle Inspection Sites located east of County Road 26 on the north and south sides of Highway 402.

On Highway 40 New, Sarnia to Wallaceburg, a contract for granular base and paving was awarded from Sombra southerly to existing Highway 40 north of Wallaceburg. This contract also included the reconstruction of existing Highway 40 from New Highway 40 southerly to Wallaceburg north limits.

A contract for resurfacing and reconstruction of Highway 40 from Chatham northerly to Wallaceburg south limits (21.6 km) (13.5 miles) was awarded and completed.



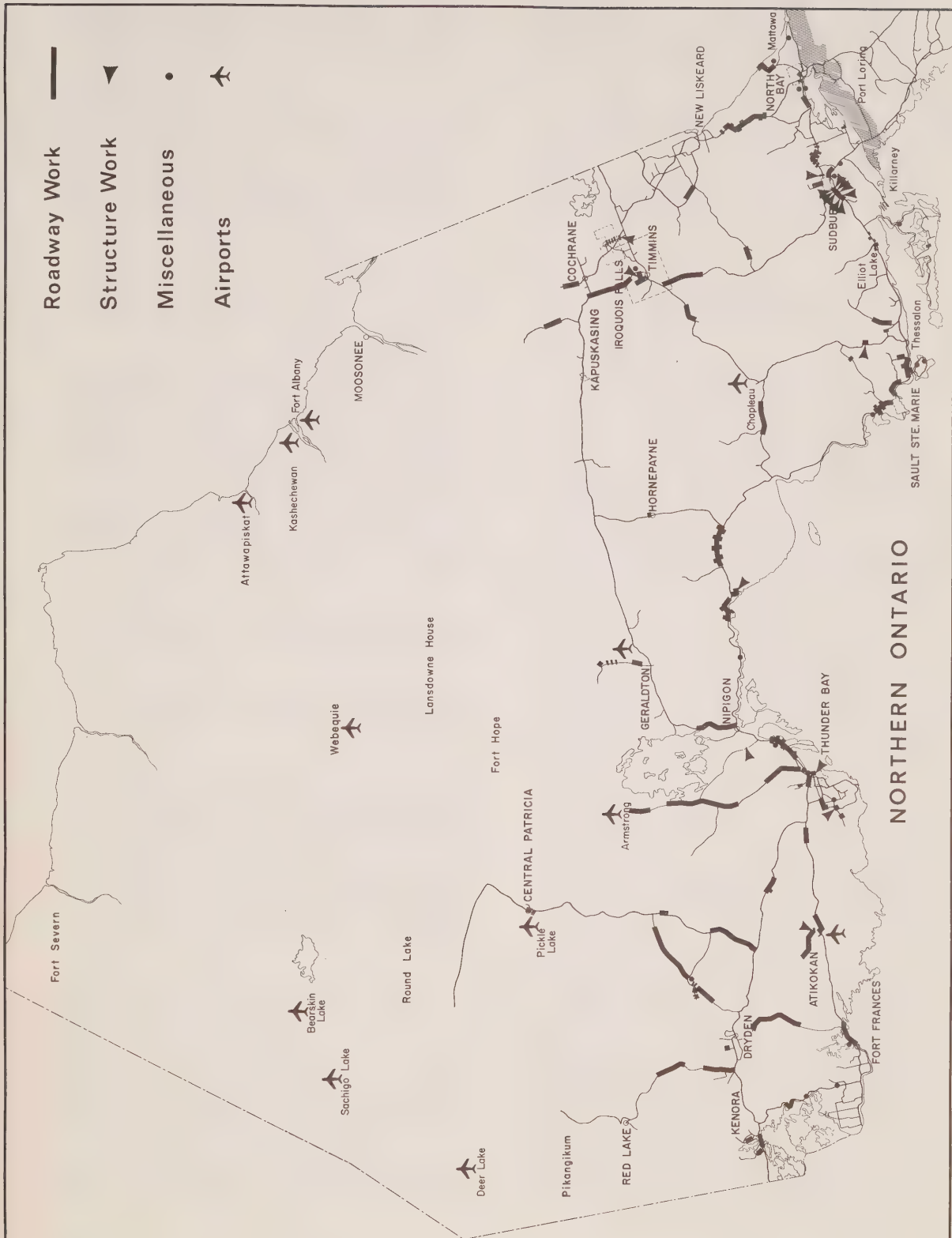
SOUTHERN ONTARIO

Roadway Work

Structure Work

Miscellaneous

Airports



NORTHERN ONTARIO

On Highway 18 in Amherstburg, a contract was awarded for 1.2 km (0.8 miles) of grading, drainage, granular base and paving and included the construction of special design culvert utility crossing for Allied Chemical of Amherstburg and the removal of a structure at the Penn Central Railway Crossing.

In London District, work was completed on the New Highway 100 from Highway 401 northerly to the Thames River, 4 km (2.5 miles). A new interchange at Highway 401 and a structure over the Thames River were included in this contract.

Grading, drainage, granular base and paving of Highway 2 from Thamesford westerly to County Road 32, 8.5 km (5.3 miles) was completed.

On Highway 3, a contract was awarded for reconstruction and widening from 1.1 km (0.7 miles) west of Simcoe west limits easterly to County Road 5 (7.4 km) (4.6 miles) and included the widening of the existing Lynn River Bridge in the Town of Simcoe.

Resurfacing was completed on Highway 59 from Holbrook southerly to Norwich and a contract awarded for grading, drainage and paving from Norwich southerly to Highway 3.

On Highway 19, a contract was awarded for grading, drainage, granular base and paving for 2.4 km (1.5 miles) from 0.9 km (0.6 miles) south of North Street, Tillsonburg northerly, including the construction of a truck climbing lane.

Work was also completed on the resurfacing of Highway 2 from 1.6 km (1.0 miles) east of Highway 80 westerly for 18.1 km (11.3 miles).

On Highway 85N, granular base and paving was completed from Waterloo north limits northerly to St. Jacobs, 6.9 km (4.3 miles).

Resurfacing was completed on Highway 23 from Listowel north limits northerly to Highway 89 and on Highway 86, from Listowel east limits easterly to Tralee, a total of 21.8 km (13.6 miles).

Grading, drainage, granular base and paving on Highway 21 from Kintail to Amberley, 10.7 km (6.7 miles) was completed.

On Highway 10 from 5.3 km (3.3 miles) north of Shelburne northerly for 12.3 km (7.7 miles), hot mix paving was completed.

Grading, drainage, granular base and paving was completed on Highway 11 from Crown Hill northerly for 7.5 km (4.7 miles). This contract also provided for the installation of box beam median barrier and the construction of three structures.

A total of 41.3 km (25.8 miles) of township roads from the junction of Highways 4 and 9 northerly and westerly to Highway 21 at Douglas Point were reconstructed to provide access for the Hydro Development at Douglas Point. This was a joint contract between MTC and Ontario Hydro.

Grading, drainage, granular base and paving was completed on the new alignment of Highway 12 from Waubaushe westerly to Hog Creek, 7.4 km (4.6 miles).

Hot mix paving was completed on Highway 26 between Minesing and Stayner, 6.7 km (4.2 miles). This contract also included grading, drainage, granular base and paving of 1.9 km (1.2 miles) to eliminate substandard curves.

Hot mix paving on Highway 21 from west junction Highway 4 westerly to County Road to Ripley 25.3 km (15.8 miles) was completed.

On Highway 9 from Clifford westerly to Mildmay east limits, 13 km (8.1 miles) hot mix paving was completed.

Central Region — Hamilton, Toronto and Port Hope Districts

In the 1977-78 fiscal year, reconstruction of Highway 3 continued with the completion of reconstruction from Dunnville westerly to Nelles Corners, a distance of 33.3 km (20.79 miles). Also, in the Hamilton area, a contract for the grading, drainage, granular base and hot mix paving of Highway 54 from Onondaga to its intersection with Highway 403 at Cainsville was completed.

The widening of Highway 401 from four to six lanes was continued east of Toronto with the completion of a contract from Brock Road to Highway 12 in Whitby, a distance of 11.02 km (6.89 miles). The first section of Highway 404 from Sheppard Avenue to Steeles Avenue was completed, as was the first contract in the Highway 427 and 409 interchange which, when completed, will provide direct access to the International Airport.

In the Port Hope area, a contract for the construction of Highway 134 from Highway 28 southerly for 9.12 km (5.70 miles) was completed. The contract included grading, drainage, granular base and hot mix paving. And, a contract for the resurfacing of Highway 401 from Grafton easterly to Colborne was completed.

Eastern Region — Kingston, Bancroft and Ottawa Districts

Grading, drainage, granular base and hot mix paving on Highway 2 from 1.4 km (0.9 miles) west of Maitland east limits westerly for 8.8 km (5.5 miles) to Prescott west limits was completed. It also included work at the Johnstown Patrol Yard 0.3 km (0.2 miles) north of Highway 401 on Highway 16.

On the Ottawa Queensway, from Hurdman's Bridge northerly to St. Laurent Blvd., 3.2 km (1.99 miles) of grading, drainage, granular base, hot mix paving and illumination has been completed. Installation of noise barriers on the north side of the Ottawa Queensway from Melrose Avenue to Loretta Avenue for 0.8 km (0.5 miles) was also completed. Grading, drainage, granular base and hot mix paving on Highway 17N from Renfrew County Road #17 westerly 15.7 km (9.8 miles) was completed.

The work of grading, drainage, granular base and structure on Highway 506 for 1.1 km (0.7 miles) at Myers Cave has been completed.

Northern Region — Huntsville, North Bay, New Liskeard, Cochrane and Sudbury Districts

MTC

Work continued on the reconstruction of Highway 11 to a four-lane divided standard, on a 12 km (7.5 mile) stretch south of Huntsville. Reconstruction of 4.8 km (3 miles) of Highway 35 in the vicinity of Minden was carried out. Work on the Vernon Lake Narrows structure on Highway 11 was started, the first in a series of projects to build a four-lane Huntsville By-pass. And, work on the paved shoulders from Waubashene to Footes Bay on Highway 69 was completed early in the year.

MNA

Passing lane construction and resurfacing on Highway 144 between Dowling and Levack was completed. The Mattawasaga River Bridge on Highway 101 (8 km (5 miles) west of the Quebec boundary) was completed. Construction of a new highway (No. 655N) was started

between Timmins (Highway 101 and Driftwood (Highway 11)). Construction of a new four-lane divided highway (No. 17N) from Lively to Whitefish was started, and additional projects are to be awarded over the next three or four years to complete this stretch. Work on the North Bay Bypass (Highways 11 and 17) continued with the award of a contract for the portion between O'Brien Street and the east junction of Highways 11 and 17.

Northwestern Region — Sault Ste. Marie, Thunder Bay and Kenora Districts

MNA

Grading, drainage, granular base and hot mix paving was completed for the four-laning of Highway 17 from east of Echo Bay to Highway 548. In addition, 32 km (20 miles) of Highway 17 north and south of Wawa has been resurfaced with the addition of passing lanes and truck climbing lanes.

Grading, drainage and granular base work for the Geraldton Airport runway, parking aprons and access road has been completed. Also, grading, drainage, granular base and hot mix paving covering the four-laning of the Thunder Bay Expressway from Arthur Street to Neebing Avenue was completed.

Granular base and hot mix paving of Highway 599 from Savant Lake northerly 166 km (104 miles) to Central Patricia was completed. And, also completed was the resurfacing of Highway 17 and paving of the adjacent shoulders from Kenora easterly 20.8 km (13 miles) to Longbow Corners.

Highway Design Office

Detail Design Section

In keeping with the Ministry's policy of decentralization, responsibility for the detailed review/scrutiny of completed contract drawings and documents was transferred to the regions in 1977.

Significant progress was made on updating the Estimating Manual and metric conversion of a number of major design computer programs. Development of a standardized data storage and retrieval system is nearing completion. New computer programs have been developed and are undergoing evaluation.

Environmental concerns continue to receive high priority.

Preliminary Design Section

Metric conversion of highway geometric design standards used by the Ministry and Ontario municipalities is virtually completed, and work is in progress updating the Geometric Design Manual. Sufficient material has been disseminated to the regions to allow them to proceed with the design of full metric projects.

A new policy on fully paved/partial width paved shoulders was completed and introduced by the Ministry. Monitoring of experimental paved shoulder installations continues, as well as an evaluation of the passing lane program.

Hydrology Section

The hydraulic design portion of the proposed Ontario Highway Bridge Design Code is nearly completed. As well, this section is contributing extensively to a number of Road Transportation Association of Canada publications.

Internally, work is progressing satisfactorily on various chapters of the MTC Bridge Hydraulic Manual. The section continues to provide a design service to the regions for complex hydrologic investigations. Altogether, about 42 studies were carried out during the year. In addition, 78 municipal structural designs were reviewed for the Structural Office.

Drainage Development Section

Staff resources in this section have been concentrated on the preparation of a new Manual of Drainage Practices. Completion is anticipated sometime in 1978/79. A study of inlet capacity for catchbasins was initiated, in co-operation with the Research and Development Division. Model studies are now underway at the Canada Centre for Inland Waters at Burlington.

Assistance was provided to the regions on a number of drainage problems, some of which involve litigation by the Attorney General's Office.

Electrical Design and Development Section

At the beginning of the fiscal year, a traffic signal design unit was transferred to this section from the Maintenance Branch. All electrical design functions carried out within the Ministry are now concentrated in this office. Updating of the Highway Lighting Design Manual and the preparation of a new Traffic Signal Manual have been essentially completed. Work is still progressing on the metric conversion of electrical

standards, specifications etc., which to a large degree is dependent on the electrical industry.

Electrical design drawings and documents for about 160 projects for electrical installation work were completed during the past year. Approximately 90 per cent of this work load was handled by external consultants.

Specifications and Standards Office

The Specifications Section and Highway Engineering Standards Section were constituted as an office in 1977 to achieve a closer liaison between their complementary functions.

The primary purpose of the office is to provide up-to-date specifications and highway engineering standards with related policies and procedures for the design, construction, maintenance, and safety of highways.

In the Specifications Section, revisions were made to 19 construction, three supplemental and 43 material specifications. Two new construction and three new material specifications were issued.

The conversion of all specifications from imperial to metric units has been progressing steadily and is 75 per cent complete.

The Standards Section issued five policy statements, developed or updated 83 highway engineering standards, modified 156 and converted 119 to metric.

The office provided advice, guidance and assistance in problem solving as requested in the above areas and is participating with the Municipal Engineers Association in the development of Provincial Standards and Specifications, as well as providing a monitoring function for regional developed special provisions and special design standards.

Contract Preparation and Control Office

This office is responsible for the preparation of final documents for the tendering of Ministry contracts. During the bidding period, they also provide clarification or official interpretation to contractors, and process the award of contracts.

During the past year, this office processed for award some 275 contracts of various types.

Contract Management Office

This new office was formed following regionalization of the program delivery function of the Design and Construction Branch.

The office is responsible for the development of new policies and procedures related to the improvement of contract management and manpower management, including staff training. It also provides technical recommendations on those matters above the regional authority. In the last year:

- New procedures for handling the issuance of Wayside Pit Permits were jointly developed with MNR to satisfy municipality concerns and provide tighter administrative control of the Pits and Quarries Act 1971.
- New procedures were developed to explore the potential of smooth-wall blasting techniques on highway rock cuts. These experiments could lead to greater safety and reduced construction and maintenance costs.
- New procedures were investigated to assure that earth borrow for highway construction was provided at minimum cost while satisfying environmental and municipal concerns.
- Joint meetings were held with MNR to assure future gravel needs of our construction program in Northern Ontario were satisfied at minimum cost to the Ministry.
- Reviewed numerous internal Ministry policies and procedures to assure the best product was obtained at minimum cost to the Ministry.
- Representatives from the office visited construction projects throughout the province to monitor construction practices and provide expertise where required.
- Participated in the Ministry review of quality assurance in construction and implemented recommendations arising from the review.

Quality Assurance Office

This office provides specialized service in all aspects of quality assurance of bituminous, concrete, soils and granular construction to the regional offices, and evaluates new construction techniques.

Highlights of non-routine work carried out in the last year include:

- The publication of a report on the evaluation of asphalt drum mixing in Ontario from 1975-77.
- The continuing study on the performance of cold-mix pavements placed by the Midland Paver. It was reported and presented to the annual meeting of the Roads and Transportation Association of Canada.
- The continued investigation on the evaluation of hot mix storage bins to determine those approved for Ministry use.
- Road roughness readings were obtained from 9,217.6 km (5,761 miles) of highways for both construction and programing evaluation.
- The provision of a specialist bituminous service and province-wide monitoring of all aspects of bituminous materials and construction.
- The continued development of a computer information management system to provide more effective concrete quality assurance.
- The provision of a specialist concrete service and province-wide monitoring of all aspects of concrete materials and construction.
- The provision of a rapid analysis of concrete service on a province-wide basis to determine the cement factor of the concrete mix.

MAINTENANCE BRANCH

With the exception of a small contingency fund, the transfer of control of winter and summer maintenance activities to all regions was completed in accordance with the Ministry's original decentralization program. Further studies are continuing to identify other areas in the various disciplines to determine the feasibility of further decentralization of control.

Roads snowplowed during the winter months totalled 24,791 km (15,408 miles). Salt used for deicing roads totalled 347,437 t (382,724 tons), a decrease of approximately 20 per cent from the previous winter of 1976-77. Sand used for winter maintenance amounted to 924,073 t (1,017,926 tons), a slight increase over 1976-77.

A research project under the leadership of Research and Development was initiated to study various winter maintenance activities. Test sites were chosen to evaluate procedures and means to minimize salt use, for reasons of

environmental protection, while providing safe winter travelling conditions.

Research is already underway and will continue through 1978-79 winter into various salt application rates for varying snow conditions, and optimum use of sand in ice control. Technical developments and experimental results published in Europe and the United States are being monitored. Final conclusions of the MTC study are expected in 1979.

Special Maintenance Services Section

A total of 21 zone stripers painted 21,672 km (13,545 miles) of King's and Secondary Highways plus an additional 12,691 km (7,932 miles) of edge line. The program included greater use of hot-applied, fast dry traffic paint.

The introduction of hot-paint stripers to our zone painting operations brought about a review of our paint application methods and a re-evaluation of our traffic control procedures. The former involved field tests and subsequent evaluation as a co-operative effort by the Head Office Maintenance Branch, Equipment Office, Laboratory Services Section and selected districts, resulting in a confirmation of the durability and application rates of fast-dry paint. The latter effected revisions to our Traffic Control Manual for Highway Work Operations.

The manufacture of overlays and new signs continued in preparation for the actual province-wide metric conversion of our highway signs. The changeover of some 19,000 regulatory signs was carried out simultaneously in all districts and was completed in 13 working days. In all, approximately 41,000 signs were replaced or revised under this project.

The Southwestern Region has concentrated sign manufacture for the region in two sign shops, Chatham and Stratford, as an initial phase in their ongoing study towards centralizing the regional manufacturing operation. The Northwestern Region, in co-operation with Head Office Maintenance, is continuing its study toward the eventual concept of centralized sign manufacture. The Eastern Region has concentrated sign manufacture in Ottawa and Bancroft districts, with the former producing the bulk of the signs for the region. This has been a successful initial phase in the overall plan to centralize the regional sign shop operation. Although no major changes in the Central Region sign shop operation have been made, the subject is under active study.

Landscape Planning and Operations Section

The Landscape Planning group was involved in 81 projects relating to activities in Planning and Design. Detail design was prepared for 36 projects scheduled for immediate implementation. A total of 75,060 trees, shrubs and seedlings were planted throughout the provincial roads system.

New construction projects required soil stabilization treatment for approximately 3,316 acres. Herbicide applications for weed and brush control were carried out over a total of 49,343 acres in all 18 districts. Maintenance operations accounted for the removal of 8,179 dead and hazardous trees.

Research report RR210 dealing with Roadside Vegetation Management has been published and recommendations are being studied for appropriate implementation.

Electrical Maintenance Section

The following is a summary of electrical projects funded by the Capital Maintenance Program:

- Highway illumination projects at 166 locations.
- New traffic signal projects and major revisions to existing signal installations at 156 locations.
- Flashing warning beacons installed at 52 locations.
- Illumination for sign installations at 47 locations.

In addition, with technical advice supplied by the Electrical Maintenance Section, the districts carried out electrical work in MTC buildings, field offices and patrol yards at 219 sites, along with electrical projects involving heating systems, pumps, and furnaces, at 175 locations.

The Electrical Maintenance Section also provided a design service for 12 projects related to temporary and emergency traffic signal or roadway illumination installations. In addition, 14 visits were made to the districts by staff to monitor maintenance programs.

Sign and Building Permits Section

Building permits issued by the 18 districts under the policy directions of Head Office totalled

4,552 with a total value for buildings and development of \$455,355,438.

A total of 6,919 Field Advertising Signs with a fee value of \$76,430 and 2,441 Guide Signs with a fee value of \$20,490 were issued.

Other permits issued included 1,166 Encroachments with a fee value of \$8,541; 2,600 Entrance Permits and 8,656 new Sign Permits and Re-issued Sign Permits with no applicable fee involved.

Equipment Engineering Office

The Equipment Engineering Office was responsible for developing and monitoring equipment maintenance and repair policies, co-ordinating and financing equipment replacement, and the maintenance of Head Office and central region fleet.

The New Equipment Section supervised the expenditure of \$5,400,000.00 for the acquisition of replacement and additional equipment, and processed the acquisition of \$712,226.00 of equipment for air strip development in the far north. Major equipment and snow plow trucks were purchased with diesel engines, to give better performance and improved fuel economy.

The "Upper Canada" ferry was transferred from Kingston to Leamington, on Lake Erie, for service on the Pelee Island crossing. To increase its passenger capacity from 35 to 100, it was necessary to install two bulkheads. This work was completed during the winter months.

A variety of specialized equipment was designed by the Design and Machine Shop Group, as well as the manufacturing of research equipment. Extensive experimentation in hot-paint application was carried out. And, assistance was given in the overhaul and modifications to the bubble system used to keep ferry channels open at Kingston.

The Equipment Engineering Office Garage maintains and services a fleet of approximately 350 pieces of equipment, supplemented by 40 rental trucks. A total of 1,725 pieces of equipment were processed and distributed to the districts.

Traffic Engineering Office

This office is responsible for setting policy and procedures applicable to traffic control strategies and devices. A variety of services to

other branches are provided in relation to data collection, subsidy approvals, sign designs and the continuing improvement of design standards by the incorporation of operational experience.

The Traffic Analysis Section completed five urban traffic operational studies for municipalities, and initiated a further seven studies.

The Traffic Signing Section developed and introduced new recreational and/or resort area signs and a new policy for signing local radio stations in Northern Ontario. New symbol signs indicating no left and no right turns were also developed and introduced.

One of the major activities of the year was the metric conversion of traffic devices in September. Procedures and standards for a low cost conversion were established and the office assisted both provincial and municipal personnel in the conduct of this task.

The Data Collection Program continued, primarily using summer students to conduct 10 Origin and Destination studies, and a variety of surveys required for research projects such as the seat belt program.

The Traffic Information Systems Development Section is continuing its role in the project team development of the Accident Information System. This project is now nearing the end of the second phase of its three phase development. Other developments are also being initiated by this section, including computerized sign design and computerized drafting of collision diagrams. Some 360 retrieval requests for accident information were handled during the year.

The Traffic Control Devices Section reviewed 27 illumination projects and 130 traffic signal installation projects on the King's Highway system. In addition, 618 applications were assessed for municipal traffic signal systems. Microprocessor-based traffic signal controllers were evaluated by staff and recommendations made regarding their future adoption by the Ministry.

The Development Section continued operation of the Queen Elizabeth Way Freeway Surveillance and Control Project in Mississauga. The ramp metering devices were put on computer control and the automatic detection of accidents and other incidents went into operation. Results indicate traffic flow has improved, accidents have been reduced and traffic volumes have increased.

DRIVERS AND VEHICLES

TRANSPORTATION REGULATION DIVISION

The Transportation Regulation Division is comprised of the Licensing and Control Branch and the Program Development Branch.

LICENSING AND CONTROL BRANCH

Driver Licensing and Control Office

The licensing and post-licensing of drivers comes under the jurisdiction of this office. The day-to-day functions also include the maintenance and administration of the Demerit Point System; the maintenance of all drivers records; administration of license suspensions; the reinstatement of driving privileges; and the review of all drivers known to have medical or physical conditions.

* 1977

Licensed Drivers	4,488,561
New Drivers	277,000
Male	2,701,394
Female	1,787,167
Demerit Point System	
Warning at 6 to 8 point level	123,454
Interview at 9 to 14 point level	28,213
Suspensions at 15 or more point level	6,864
Suspensions for 30 days	5,898
Suspensions for 6 months	966
Suspensions for physical or medical reasons	1,854
Suspensions for drinking and driving	44,325

*Estimates only — subject to revision

Vehicle Licensing and Control Office

A major responsibility of this office is the registration and licensing of the province's 4.8

million vehicles and the provision of relevant vehicle registration information for the purpose of law enforcement.

Licensing service was provided to the public throughout Ontario by 11 Ministry offices and 299 appointed licence-issuing agents.

An automated system handles the 3.6 million passenger and half-million trailer registrations. Other records are maintained manually for commercial motor vehicles, buses, motorcycles, mopeds and motorized snow vehicles.

The licensing of public commercial vehicles and public vehicle operations is also administered by this office.

PROGRAM DEVELOPMENT BRANCH

The Program Development Branch is responsible for providing the primary staff resource to the Drivers and Vehicles area of the Ministry in the assessment of transportation regulation of programs and in the development of new policies and programs for that area.

The branch is comprised of five offices: Project Development Office; Program Planning & Evaluation Office; Vehicle Standards Office; Safety Co-ordination and Development Office, and Carrier Policy and Reciprocity Office.

Project Development Office

The Project Development Office is an integral part of the Program Development Branch. It reacts to requests and demands for new policies and laws in the area of driver and vehicle administration. It accomplishes this task through a project assessment and development process, involving an initial screening of policy proposals to determine the validity of such proposals in relation to government/industry policy guidelines. In addition, the office

assesses ideas, recommends priorities, develops thoroughly-researched positions and guides feasible proposals through the various steps of approval.

In the next year, the office will, through its program specific projects, continue to place a high priority in the continued development of public carrier policy in Ontario. And, recognizing the importance of the driver in the highway safety program, will address the regulation of driver instruction and a probationary driver system.

Program Planning and Evaluation Office

The Program Planning and Evaluation Office plans and co-ordinates the development of an effective measurement and assessment process for the various elements of the Transportation Regulation Program. The information obtained through this process is provided to senior management for policy decisions and comprehensive planning of the Transportation Regulation Program.

The office also performs a financial monitoring and reporting role for each of the cost centres within the program, and is extensively involved in the development of the multi-year plan and program multi-year plan.

In addition, the office supplies the appropriate information for the Transportation Regulation Planning Committee. And, it acts as a focal point in the Transportation Regulation Program for the development and co-ordination of the Strategic Planning Process. These elements include the program position and prospects paper, program guidelines and updated program structure.

Vehicle Standards Office

The Vehicle Standards Office participates in the development of vehicle-related safety standards, legislation and regulations, and provides engineering expertise internally and externally in matters relating to vehicle design, safety standards and government control.

In addition, the office investigates accidents in which vehicle condition may have been a contributory factor, and recommends appropriate government action. For some of the accidents, it attends Coroner's Inquests as expert witness and prepares Ministry responses to jury recommendations.

As an ongoing program, the office manages the equipment approval program covering vehicular devices requiring Ministry approval under The Highway Traffic Act.

Safety Co-ordination and Development Office

The Safety Co-ordination and Development Office functions within the Program Development Branch to ensure the continued improvement of the effectiveness and efficiency of Ministry highway safety regulation. The office provides liaison services for the Co-ordinator of Highway Safety.

In addition, the office participates with other branch offices in the design and implementation of development projects. It also provides a liaison service for the Transportation Regulation Division with the Research and Development Division and, as necessary, with outside research and development resources.

Carrier Policy and Reciprocity Office

The Carrier Policy and Reciprocity Office initiates, develops, revises, and co-ordinates major transportation policies affecting the safe, efficient and economic movement of people and freight by the highway carrier industries in Ontario. And, in so doing, is sensitive to the implications of such policies for both the highway carrier industries and the economy of Ontario.

Specifically, the Carrier Policy and Reciprocity Office co-ordinates the activities of the Government of Ontario regarding commercial vehicle reciprocity with other North American jurisdictions; conducts and co-ordinates special studies and negotiations related to government policies and to reciprocity arrangements respecting commercial vehicles; defines and participates in related policy and legislative projects conducted by the Ministry of Transportation and Communications, the Ontario Government and inter-governmental organizations, and provides an information and liaison service on matters relating to government policies respecting the highway carrier industries.

In the upcoming year, the office will continue to place a high priority on negotiating licence plate reciprocity for Ontario based vehicles travelling in other North American jurisdictions.

REGIONAL OPERATIONS DIVISION

This division is divided into 13 districts contained within five regions: Northwestern Region (Thunder Bay); Southwestern Region (London); Northern Region (North Bay); Eastern Region (Kingston); and Central Region (Toronto).

The responsibility for field operations throughout the province in the areas of driver examination, vehicle inspection, and enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act, and The Motor Vehicle Transport Act (Canada), including investigation and prosecution of illegal trucking operations in the province, is administered by this division.

Driver Examination

A total of 747,930 inside pre-test examinations were conducted at 165 driver testing facilities throughout the province, and 416,820 road tests were conducted by a staff of 229 driver examiners.

During the summer months of July and August, 50 high school driving instruction teachers were employed as driver examiners. During 1977, Ontario recruited additional female driver examiners, bringing the total of female driver examiners to 15 employed in various driver examination centres across the province.

Vehicle Inspection

A staff of vehicle inspectors administer programs designed to reduce death, injury and property damage caused by defective vehicles.

The 23,837 inspection mechanics registered under licences of 8,819 appointed inspection stations are permitted to complete safety standards certificates. A total of 892,008 certificates were filed in 1977.

The inspection of safety-related vehicle components or systems on heavy commercial motor vehicles is carried out at roadside inspection sites across Ontario and at operators terminals. The majority of the roadside inspections are performed at MTC truck inspection stations. A total of 46,627 inspections were performed, 33,000 at roadside and 13,627 in truck terminals.

A total of 6,908 vehicles were removed from service during the roadside inspections

and 1,413 units were tagged unfit during terminal inspections. Notices to report for inspection were issued to a further 986 vehicles.

During the year, 38,964 cars and light trucks were inspected at the vehicle inspection lanes at Downsview and 43,804 were inspected by portable inspection lanes travelling throughout the province during the summer months. The inspection lanes identified 7,704 vehicles having defects so serious in nature as to make further operation impossible until repairs were made.

In the semi-annual inspection of school buses, some 20,000 inspections were made across the province.

Highway Carrier

The regulation of for-hire trucks and buses, and the enforcement of the provincial weight laws are the responsibility of the 180 highway carrier officers. A total of 46 truck inspection stations are operated through the province, which are in turn supplemented by mobile patrols in designated areas. As a result, some 2,589,085 vehicle inspections were carried out.

Driver Improvement Counselling

A staff of 16 counsellors conducted 38,388 interviews with Ontario drivers reaching the nine-point level under the Driver Demerit Point Program.

Investigations and Prosecutions Office

The Investigations and Prosecutions Office co-ordinates enforcement activities to ensure uniform enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, and Motor Vehicle Transport Act (Canada), and conducts in-depth investigations as provided by Section 15 of The Public Commercial Vehicles Act.

During the past two years, a comprehensive, off-highway enforcement program has been developed implementing in-depth investigation, requiring examination of all books, records and documents. These investigations have become the rule rather than the exception. Numerous investigations have been conducted by this office into the operations of unlicensed truckers providing for-hire service under the guise of a lease arrangement.

More recently, there has been increased activity in examination of licensed carriers' books, records and documents to establish if the

operation is complying with the terms and conditions of their transport authority. In the case of non-compliance, an investigation report, together with supporting documentation, is filed with the Ontario Highway Transport Board.

As a result of these in-depth investigations, there are currently 1,338 cases before the courts for contravention of The Public Commercial Vehicles Act and/or The Motor Vehicle Transport Act (Canada). Approximately one-third involved purported leasing arrangements. Subsequent to registered convictions establishing a pattern of illegal operations, the Registrar of Motor Vehicles has exercised his powers under Section 27 of The Highway Traffic Act and issued some 47 notices of cancellation of plates and permits.

In addition, as of March 31, 1978, there have been 234 reports submitted to the Ontario

Highway Transport Board.

Staff Safety Office

This office is responsible for devising policies, programs and safe practices designed to protect the 12,000 MTC employees from work-related accidents and injuries, and accidents involving MTC motorized equipment.

Altogether, 406 employees completed an eight-hour course in defensive driving in 1977/78.

There were 1,519 equipment operators awarded Safe Driving Awards in 1977, including 62 who achieved the 20-year milestone award.

First aid certification was obtained by 604 employees in the last fiscal year through St. John Ambulance.

FINANCE AND ADMINISTRATION

Financial Management Services Unit

In February, 1977, senior management formed a Financial Management Services (FMS) Group to provide senior and line managers with the technical tools and information to improve upon the financial management process. The unit consists of three groups: Financial Analysis and Assessment Office, Forecasting Office and Budgetary Review Office.

Financial Analysis and Assessment Office

Financial Analysis and Assessment is concerned with the impact of potential undertakings on any or all of MTC's limited resources (monetary, manpower and physical plant). The office provides assistance to line or project managers in carrying out appropriate financial analyses and assessments. FA&A also provides an independent financial perspective to senior management on these undertakings or other critical issues.

In addition, the office has developed a program to introduce the concepts of FA&A to Ministry personnel. In November, a seminar was held for senior managers. And, material was prepared for forthcoming seminars to other levels of personnel.

Forecasting Office

The role of this office is two-fold. First, it provides the financial forecasting services required to formulate the Ministry's multi-year and annual financial plans. Secondly, through the formulation of a multi-year plan, it fulfills the Ministry's operational needs while complying with both the directives of Management Board and the long-term objectives of Government.

In 1977-78, a multi-year plan process was initiated. The resulting plan was endorsed by the Minister and presented to the Cabinet Committee on Resources Development.

Budgetary Review Office

The broad goal of this office is to assist in the development of plans for the efficient utilization of MTC resources, now and in the future. To this end, the Budgetary Review Office ensures that the Ministry develops appropriate review processes, particularly in the area of resource utilization, and assists in the development of solutions to identified problems associated with the utilization of MTC's resources.

During 1977-78, the Ministry extended the use of Management by Results contracts for all activities included in the Estimates for 1978-79. The Budgetary Review Office assumed responsibility for the administration of the MBR process and reporting to Management Board. And, it began a study to improve the MBR process to better meet the needs of the Ministry's managers.

Insurance and Claims Office

The Insurance and Claims Office of the Ministry is charged with the responsibility of dealing with a very large volume of claims filed by the public against the Ministry.

The handling of such claims entails obtaining detailed reports from regional and district offices, from the police where applicable, and field investigations where necessary.

With regard to accidents involving Provincial Government vehicles, the Insurance and Claims Office handles these matters not only for this Ministry but also for the whole Provincial Government with the exception of the Ontario Provincial Police.

The Insurance and Claims Office institutes claims against the public for damage to Crown property such as bridges, light standards, guide rails etc., and where necessary, arranges for legal action to be taken against responsible

parties through the Ministry of the Attorney General.

The office handled approximately 13,000 claims of all types during the fiscal year, as well as some 5,000 claims carried over from previous years, which are still unresolved.

Office of Legal Services

The Office of Legal Services is a law office within the Ministry providing legal services to the Minister and Ministry staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to the Ministry. They are located at Downsview and at each of the regions.

The office provides legal advice on all aspects of the Ministry's programs and prepares the legal documentation through which such programs are carried out. The office advises on legislation affecting the Ministry and prepares and recommends amendments to the statutes the Ministry administers.

Legal office counsel provide representation for the Ministry before the many administrative boards and tribunals with which the Ministry comes into contact and conducts prosecutions for offences under the Ministry's statutes.

SERVICES DIVISION

COMPUTER SYSTEMS BRANCH

The function of this branch is twofold. One purpose is to co-ordinate the Ministry's system activities, funding, and to advise Ministry management on systems planning matters.

The second purpose is to provide program managers with expertise in automated and related non-automated systems and the acquisition, development and maintenance of automatic data processing services.

This branch acts as a clearing house for all computer program development, with systems co-ordinators acting as catalysts by identifying system opportunities and advising program managers.

There are currently more than 100 computerized systems supporting various programs of the Ministry. All aspects of systems development and maintenance activities performed by the branch co-ordinators' offices include:

Systems Co-ordinators' Offices Engineering and Research Planning and Design

These two offices are responsible for all engineering systems in the structural, road design, transportation planning, research support, and communications areas. There are 50 active systems supporting the work process in every facet of highway building and transit planning.

In the past year, the conversion of all engineering programs to metric units has been completed. For Communications Division, a Broadcast/Cable Data Base has been developed to aid in establishing Government policies.

Systems Co-ordinator's Office Driver and Vehicle

This office is responsible for systems support for transportation regulation with regard to drivers and vehicles. During the past year, the data accuracy in the Vehicle Registration System has been significantly improved enabling law enforcement agencies to use the data for tactical enquiries such as tracing hit and run vehicles.

A direct deposit system to enable issuing agents throughout the province to daily deposit fee collections was introduced allowing monthly balancing of financial transactions.

Many enhancements were made to the Classified Drivers Licensing and Control System, including a bilingual license and metrication of speed, distance, and driver's height to conform with all highway signs.

Systems Co-ordinator's Office Finance and Administration

This office is responsible for systems support in the administration of this Ministry. In the past year, the Operations Management System, dealing with financial transactions in the regions and districts as well as Head Office, has been designed and programmed. Altogether, 19 intelligent terminals have been ordered by tender to automatically link all regions and districts to a central computer data base. These terminals will be installed during 1978/79.

Production Services Office

This office is responsible for the provision of comprehensive support to all users of the Ministry with respect to data conversion, technical

control, documentation and administrative support, computer services monitoring and graph plotting services for engineering applications.

The Ministry is using a large number of time-sharing, remote job entry, and on-line enquiry terminals linked to a large government data centre employing IBM 370/168 and 370/158 computers.

The driver and vehicle data bases are available on-line to law enforcement agencies 24 hours a day, seven days a week. Batch jobs processed averaged between 9,000 to 10,000 per month.

SUPPLY AND SERVICES BRANCH

This branch is responsible for the development and monitoring of supply and services' policies and procedures for the Ministry. It is also responsible for the delivery of these services throughout Head Office, the Ministry of Northern Affairs, throughout the Ministry for some, and the government for the purchase and disposal of motor vehicles. These services are provided through the following five offices:

Purchasing and Supply Office

The Purchasing Section — Materials and Operating Supplies — is responsible for the purchase of all construction and maintenance materials, and general supplies for the Ministry. Annual purchases total approximately \$50 million.

The Purchasing Section — Vehicles and Equipment — is responsible for the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government Ministries and agencies. Annual purchases total approximately \$20 million.

The Stores Section — the Ministry takes advantage of savings by bulk purchasing and facilitates the operational part of the Ministry by having materials available when required. They also recondition and store Bailey bridge components for emergency use throughout the province. There are currently 220 such installations in the province for the Ministry, municipalities, or other agencies.

Special Services Office

This office is responsible for the administration of a capital building program involving the

Ministry's total major building and space requirements, including office furnishing and equipment at Head Office and at regional and district headquarters. The office is also responsible for the provision of accommodation, telecommunication, and postal services within the Ministry, and for the administration of service centres on controlled access highways.

In the past year, a major capital construction project — an addition to the Ottawa District Garage — was completed. In addition, working drawings are being prepared for a Regional Laboratory Building at Kingston, and an addition to the District Repair Garage in Thunder Bay.

A major accommodation alteration program to consolidate all MTC Head Office administration functions at the Downsview Complex is also well underway. Accommodation of divisions and branches into restructured organizations is an ongoing activity.

Major telecommunications projects completed in the past year include the installation of multi-channel VHF/UHF radio systems at Port Hope and Sudbury Districts. The design of a similar radio system for North Bay District is scheduled for installation in 1978-79.

With regard to the Ministry's northern airstrip program, two new non-directional radio beacons were installed at Fort Hope and Lansdowne House, and a frequency change was carried out at the Fort Albany beacon.

During the year, extensive study was conducted by the Special Services Office regarding audio and video teleconferencing, and the subject of high speed facsimile was examined as a possible replacement system for the present teletype service.

In accordance with the accommodation alteration program, a number of major telephone and intercom moves were completed. In an effort to resolve telephone answering problems regarding inquiry calls from the general public, a number of automatic answering and message recording devices were investigated.

Extensive liaison work with GO Transit resulted in the expansion of a private line platform-paging system from Union Station to Richmond Hill. Other Liaison work involved the design and installation of an Audio Teleconferencing System, and expansion of the Telex facilities for the Ministry of Northern Affairs.

Special Services Operations Section is also responsible for all the Ministry's incoming and outgoing mail handling, Courier Mail Service to all regional and district offices, and Downsview Teletype Centre activities.

The Distribution Centre and Cancel Plate-room at Queen's Park are important responsibilities of this section, handling heavy volumes of stock, licence plates, permits, drivers licences and returned licence plates.

The following volumes of mail items, teletypes, orders and plate cancellations for 1977 shown below will illustrate the high level of activity by this section:

Outgoing Mail	1,939,359
Incoming Mail	3,284,946
Teletype Messages	179,981
Orders processed	65,674
Plate Cancellation	202,433

With respect to Service Centre administration and activities, 23 centres were in operation at the end of the year, 19 on the Macdonald-Cartier Freeway, and four on Highway 400. Revenue derived from the locations exceeded \$3,800,000. Facilities and services available at Service Centres on a 24-hour basis included: restaurants, washrooms (including handicapped), public telephones, first-aid, automotive fuels and lubricants, and emergency towing and repair services.

In order to maintain minimal essential services during periods of hydro power failure, emergency standby power generators have been installed at six service centres. And for the added enjoyment, convenience and relaxation of the travelling public, 21 picnic rest areas are in operation at service centre locations.

Graphic Services Office

The principal functions of the Graphic Services Office are to provide printing and duplicating services; a wide variety of high quality black and white and colour reproduction services using photographic, diazo, screen processing and xerox methods; and a commercial art and display service for the various Ministry programs.

Approximately 26,000,000 impressions were produced in our offset reproduction facility; 35,000 requests for reprographic services were processed, 500 requests for graphic art work were completed and our display unit participated

in eight exhibitions and provided a float for parades and carnivals at various locations.

Record Services Office

This office administers a program of records management providing assistance to all Ministry organizations in the efficient handling of records and information. Under this program, Forms Management and Microfilm Services are centralized services used to improve the Ministry's record-keeping practices.

This office also provides a library service, now recognized as an authoritative source of information in the Ministry's fields of interest and responsibility. Publication services, including the printing, distribution and sale of Ministry maps and publications is another responsibility of this office. During the year, maps were sold at the regional and district offices throughout the province. Revenue was down slightly to \$33,000.

General Services Office

Government Garage — The Government Garage is responsible for the maintenance of government-owned sedans operated by Cabinet Members and senior management at Queen's Park, as well as providing a limousine and chauffeur pool service.

Field Review and Disposal — The disposal of all used Ministry equipment, surplus material and all Ontario Government motor vehicles is done through the Field Review and Disposal Office. Disposal is by means of public auction or tender. Sales total about \$2,500,000 a year. Field visits ensure compliance with Ministry policies and procedures for purchasing and stores.

Tenders Office — This office promotes and maintains strict security over all tendering procedures, tenders in custody and all confidential matters relating to engineering and supply contracts.

Approximately 11,000 tenders were received and processed for 2,000 various contracts. Public attendance by contractors and suppliers numbered 2,200 at the tender openings.

In the advertising function, this office placed approximately 3,000 insertions on behalf of the Ministry on a province-wide basis. These advertisements called tenders on engineering and supply contracts, property sales, equipment sales and a variety of other notices.

The direct cash sales of Contract Documents, the Standard Specification Manual and the Ministry's Contract Bulletin to the contracting industry, produced an annual revenue of approximately \$52,000.

Instrument Repair Shop — All Ministry-owned survey equipment, traffic counters and allied equipment are repaired and tested at this facility.

Accounting and Asset Control — This section is responsible for the monitoring and administrative control of the Movable Asset Inventory Control Program for the Ministry. It is also responsible for the requisitioning of special equipment for the Ministry, such as: microwave measuring units; tellurometers; geodometers; transits; levels and traffic recorders. Approximately 100,000 items are controlled by the Asset Program.

Supply and Services Planning — This office co-ordinates and provides an analytical and cost planning function for the Supply and Services Branch.

PROPERTY BRANCH

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions are developed by this office.

Using these policies and procedures, staff in five regional offices negotiated 1,616 amicable property settlements. The Ministry expropriated 448 properties to obtain title for land required to permit contracts to proceed.

The Ministry expended \$19,424,465 in payment of compensation in acquiring title to lands required for highway projects. An additional \$1,760,114 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$7,131,239 from the sale of surplus lands and \$626,431 from leasing properties was received by the Ministry.

The Ministry's formal training program has been revised and now consists of courses involving appraisals and negotiations to which both this Ministry and MGS participate. In all, 37 staff

members attended the Advanced Appraisal Course and 58 attended the Principles of Right-of-Way Acquisition Courses #101, #201 and #202.

PUBLIC AND SAFETY INFORMATION BRANCH

This branch writes, edits and distributes all aspects of Ministry news or safety-related information campaigns through the use of news releases, speeches, statements, media conferences, displays and films.

Transportation safety education and information programs are created, promoted and organized for all age groups, including safety education and information programs ranging from nursery school and kindergarten groups to senior citizens, promoting public-safety awareness.

The necessary expertise required for layout, editing, marketing and advertising is also provided to produce brochures, pamphlets, booklets and bulletins.

In addition, this branch is responsible for the production of in-house television and radio spots, films, slide shows, audio-visual services, and print copy.

This past year, a new film entitled, "Sam on Winter Safety" was produced and, through police co-operation, is being shown in all Ontario schools. The film combines animation and live action to depict winter hazards encountered by children, such as tobogganing, thin ice, live wires, snow tunnels and snowmobiling. And it recommends safety precautions.

Currently, three new films are in production concerning seat belts, drinking and driving, and truck jackknife control. These films should be completed this autumn.

Other branch responsibilities include the planning and operating of the "Safety Caravan" at fall fairs, winter carnivals and other public gatherings; arranging and organizing official functions and opening ceremonies; the CNE show; producing several periodical publications, including the MTC News, The Ontario Traffic Safety Bulletin and the Annual Report; and providing the Ministry's road reporting service to the motoring public.

INTERNAL AUDIT BRANCH

This branch is responsible for the audit activities of the Ministry and, during the year, was appointed Auditors of Record for the Ministry of Northern Affairs. Under the general direction of the Deputy Minister, the branch is segregated into the following three areas of responsibility to accommodate this function:

Operational Audit Office

This group is engaged in the expenditure, revenue and operational review of the Ministry's 18 District Offices, five Regional Offices and Head Office administrative units, as well as some 300 private licence-issuing agents throughout the province.

The staff also performs audits in municipalities dealing with Ministry subsidized road and transit expenditures. This function extends to cover such agencies as the Toronto Area Transit Operating Authority and the Ontario Highway Transport Board, as well as specific programs concerning expressways and connecting links.

During the fiscal year, certain audit procedures were carried out on behalf of the Ministry of Northern Affairs and its agency, the Ontario Northland Transportation Commission and its subsidiaries, the Owen Sound Transportation Company Limited and Star Transfer Limited.

Engineering Audit Office

The Engineering Audit Office, with complement in five Regional Offices and Head Office, audits all phases of the Ministry's capital construction program and Ministry subsidized contracts.

In 1977-78, some 820 interim and 480 final audits were performed to ensure proper progress and final payments on contracts. During the construction year, 2,100 weigh audits were completed on capital and subsidized contracts.

Claim audits were performed on 55 contracts and 200 special assignments were completed. Audits of 20 design projects and 20 negotiation reviews rounded out this office's activities.

Project and EDP Audit Office

This office performed specialized audits on items of complex or contentious nature. Miscellaneous investigations were undertaken as directed.

Force Account payment audits were performed involving records of contractors. Claim and negotiation audits were carried out as requested by Engineering Claims Office, Design and Construction Branch and Regional Construction Offices.

Audits of Ministry electronic data processing operations were conducted to evaluate and determine effectiveness and efficiency of the systems.

MINISTRY EXPENDITURE BY HIGHWAY

APRIL 1, 1977 TO MARCH 31, 1978

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster — Windsor	\$ 4,281,137	\$ 3,010,944
3	Fort Erie — Windsor	5,569,879	1,947,554
4	Port Stanley — (Creemore)	11,763	1,108,420
5	Toronto — Paris	588,870	545,441
6	Hwy. 24 — Tobermory	340,117	1,760,267
7	Ottawa — Sarnia	5,553,265	3,485,438
7A	Hwy. 115 — Hwy.12 (Manchester)	189,160	184,313
7B	Peterborough-Chemung Corners	—	48,632
8	Winona — Goderich	1,277,949	793,422
9	Hwy. 11 — Kincardine	835,277	852,938
10	Port Credit — Owen Sound	1,824,345	870,369
11	Toronto — Rainy River	16,473,401	6,200,736
11B	At New Liskeard	131,287	57,947
12	Whitby — Midland (7)	781,730	663,073
14	Bloomfield — Marmora	1,109,126	223,244
15	Kingston — Carleton Place	46,747	420,378
16	Johnstown — Ottawa	509,076	352,021
17	Quebec Bdry. — Manitoba Bdry.	16,507,166	6,732,482
17B	At North Bay	—	3,525
18	Leamington — Windsor	926,112	193,134
18A	Kingsville — Hwy. 18	24,364	89,663
19	Port Burwell — Tralee	1,532,702	484,158
20	Niagara Falls — Hamilton	35,281	451,555
21	Hwy. 3 (Morpeth) — Owen Sound	885,369	1,102,868
22	London — Hwy. 7	—	178,179
23	Hwy. 7 — Hwy. 9 Teviotdale	216,248	437,685
24	Hwy. 59 — Collingwood	85,571	857,354
24A	Paris — Galt	—	38,700
25	Oakville — Hwy. 89	6,690	475,985
26	Barrie — Owen Sound	923,793	458,563
27	Toronto — Penetanguishene	3,118,950	743,444
28	Port Hope — Bancroft	755,767	448,177
29	Brockville — Arnprior (15)	1,357,896	355,844
30	Brighton — Havelock	—	160,939
31	Morrisburg — Ottawa	32,805	329,533
32	Gananoque — Hwy. 15	913,701	58,042
33	Kingston — Stirling	329,634	420,666
34	Hwy. 2 (Lancaster) — Hawkesbury	385,630	246,718
35	Hwy. 401 (Newcastle) — Dwight	598,821	573,338
35A	Fenelon Falls — Hwy. 35	16,104	10,713
36	Burleigh Falls — (Hwy. 7)	834,894	226,444
37	Belleville — Hwy. 7 (Actinolite)	781,379	136,489
38	Kingston — Hwy. 7 (N. of Sharbot Lake)	1,175,305	231,317
40	Blenheim — Sarnia	4,584,509	533,690
40A	Sarnia By-Pass	—	3,471
40B	At Sarnia	—	1,385
41	Napanee — Pembroke	2,238,822	712,604
42	Brockville — Westport (29)	—	167,864
43	Alexandria — Perth	855,731	545,969

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
44	Hwy. 17 — Hwy. 29 (Almonte)	4,987	59,950
45	Cobourg — Norwood	6,525	177,313
46	Hwy. 7 (E. of Manilla) — Bolsover	331,093	85,758
47	Hwy. 48 (N. of Hwy. 7) — E. of Hwy. 12	2,102,263	216,860
48	Toronto — Hwy. 35 (Coboconk)	698,829	531,729
48B	Jct. 12 & 48 to Jct. 48	198,058	40,590
49	Picton — Hwy. 401 (W. of Desoronto)	—	79,632
50	Toronto — Hwy. 89	498,705	295,523
51	Rondeau Prov. Park — Jct. Hwy. 3	—	17,991
52	N. of Hwy. 97S — Hwy. 2	9,363	132,259
53	Hamilton — Hwy. 2 (Eastwood)	1,211,127	271,325
54	Cayuga — Cainsville	705,861	268,740
55	Hwy. 401 — Niagara	20,314	72,579
56	Jct. Hwy. 3 — Jct. Hwys. 53 & 20	13,179	152,719
58	Port Colborne — St. Catharines	645,714	243,771
59	Long Point — Shakespeare	646,340	431,214
60	Hwy. 17 (W. of Renfrew) — Huntsville	783,432	830,400
61	International Bdry. — Thunder Bay	1,177,717	151,171
62	Hwy. 14 (N. of Belleville) — Pembroke	269,674	808,085
63	North Bay — Quebec Border	16,301	205,583
64	Sturgeon Falls — Hwy. 11	2,608,859	479,623
65	Quebec Border — Matachewan	900,496	408,639
66	Quebec Border — Hwy. 65	502,879	330,169
67	Iroquois Falls — Hwy. 101	—	76,602
68	Hwy. 17 (Espanola) — S. Baymouth	28,041	454,385
69	Hwy. 12 (N. of Brechin) — Capreol	1,534,995	1,268,630
69B	At Parry Sound	11,529	—
70	Springmount — Hepworth	7,523	58,569
71	Fort Frances — Hwy. 17 (E. of Kenora)	1,511,167	362,820
72	Hwy. 17 (Dinorwic) — Sioux Lookout	—	136,983
73	Port Bruce — Dorchester	—	148,544
74	Hwy. 3 (New Sarum) — Nilestown	241,650	92,819
76	Hwy. 3 (Eagle) — Hwy. 2	183,688	77,211
77	Leamington — Hwy. 401 (N. of Comber)	16,741	66,095
78	Hwy. 21 (Dresdan) — Wallaceburg	—	45,213
79	Hwy. 2 (Bothwell) — Hwy. 7	—	133,092
80	Hwy. 2 (S. of Glencoe) — Courtright	—	334,995
81	Delaware — Grand Bend	994	262,416
82	Hwy. 7 Jct. — Hwy. 21	—	25,903
83	Hwy. 23 (Russeldale) — Hwy. 21	778	166,373
84	Hensall — St. Joseph	326	69,725
85	Kitchener — Elmira	1,112,312	103,741
86	Guelph — Amberly	394,248	496,288
87	Harriston — Hwy. 86 (Bluevale)	636	135,996
88	Bradford — Hwy. 27 (Bond Head)	21,757	41,937
89	Hwy. 11 — Hwy. 23 (E. of Palmerston)	416,126	517,588
90	Barrie — Angus	76	95,096
91	Stayner — Duntroon	—	31,777
92	Elmvale — Wasaga Beach	548	65,343

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
93	Hwy. 11 (E. of Barrie) — Waverley	93,303	161,719
94	Callander — Hwy. 17 (S. of North Bay)	—	30,716
95	Alexandria Point — Wolfe Is.	3,831	51,022
96	Port Metcalf — W. End of Wolfe Is.	7,662	122,199
97	Hwy. 6 (Freelton) — Hickson	1,473	219,849
99	Dundas — Hwy. 24 (N. of Brantford)	15,194	148,789
100	Jct. Hwy. 401 to London	1,178,296	—
101	Quebec Border — Hwy. 17 (Wawa)	2,658,094	1,330,362
102	Thunder Bay — Sistonens Corners	1,624,467	82,442
103	Waubauskene — Hwy. 69	919,730	—
105	Hwy. 17 — Red Lake	688,194	505,549
106	Hwy. 28 (Dale) — Hwy. 2 (Welcome)	1,066	14,037
108	Hwy. 17 — Hwy. 639 (Quirke Lake)	2,459,853	150,886
112	Hwy. 11 — Hwy. 66 (Swastika)	13,707	93,709
115	Newcastle — Peterborough	147,632	163,643
117	Jct. Hwy. 11 - Jct. 35	674,707	193,944
118	Hwy. 11 — Hwy. 169	740,668	92,056
121	Hwy. 28 — Hwy. 35 (S. of Fenelon Falls)	417,350	435,634
122	Jct. QEW to Jct. QEW	997	—
123	Hwy. 11 — North Bay Airport	—	649
124	Sundridge — Parry Sound	33,352	266,536
125	Hwy. 105 — Red Lake	—	28,539
126	Hwy. 401 — Hwy. 2 (London)	8,507	73,870
127	Maynooth — Hwy. 60 (E. of Whitney)	24CR	112,505
129	Thessalon — Chapleau	2,339,412	642,222
130	Port Arthur — Hwy. 61	60,116	70,970
132	Renfrew — Hwy. 41	22,863	87,060
133	Hwy. 33 (Millhaven) — Hwy. 401	—	32,360
134	Jct. Hwy. 7 — Jct. Hwy. 28 (Lakefield)	1,355,908	50,608
135	Hwy. 401 — Hwy. 2 (London)	55,848	25,010
136	Hwy. 24 — Orangeville	—	69,806
137	Hwy. 401 — Thousand Island Bridge	—	22,400
138	Cornwall — Monkland	13,316	151,965
140	Hwy. 3 (Port Colborne) — Hwy. 20	—	86,272
141	Hayes Corners Hwy. 69 — Jct. Hwy. 11	12,444	161,989
144	Sudbury — Hwy. 101	842,458	1,082,119
169	Jct. Hwy. 12 to Jct. Hwy. 69	3,367	213,192
400	Toronto — Hwy. 12 (Coldwater)	431,636	1,985,869
401	(MCF) Quebec Border — Windsor	14,384,657	10,387,725
402	Hwy. 7 - Blue Water	14,710,342	52,276
403	Burlington — Brantford	3,630,428	669,011
404	Toronto — Hwys. 7 & 12	8,391,647	80,621
405	QEW — International Br. (Queenston)	3,539	114,894
406	Hwys. 20 — 58 — QEW	1,641,727	167,070
409	Belfield Expressway Hwy. 401 — International Airport	8,561,194	175,337
410	Hwy. 401 — Jct. Hwy. 7 & 10	2,507,770	47,606
417	Quebec Boundary — Ottawa	5,620,190	1,025,392
420	QEW — Rainbow Bridge (Niagara Falls)	240,175	64,197
427	QEW — Hwy. 401	3,399,955	656,973

MINISTRY EXPENDITURE BY HIGHWAY

KING'S HIGHWAY

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
451	(QEW) Toronto — Fort Erie	6,395,419	4,313,128
458	Ottawa Queensway	126,210	253,883
461	Ottawa-Hull Macdonald — Cartier Bridge	13,453	—
TOTAL KING'S HIGHWAYS		\$183,933,357	\$ 78,464,009

SECONDARY HIGHWAYS

500	Hwy. 41 (Denbigh) — Bancroft	—	212,131
503	Tory Hill — Kirkfield	1,389,353	415,069
504	Hwy. 620 — Apsley	—	81,258
505	Hwy. 46 — Uphill	—	63,538
506	Plevna — Hwy. 41	67,246	99,767
507	Hwy. 28 (Lakefield) — Hwy. 503	201,058	188,097
508	Burnstown — Black Donald Mines	35,955	179,812
509	Hwy. 7 — Snow Road Station	102,674	160,994
510	Magnetawan — Hwy. 124	—	9,534
511	Brightside — Hwy. 508	—	188,478
512	Eganville — Hwy. 60	2,932	138,705
513	Hwy. 132 — E. of Hyndford	—	67,272
514	Hwy. 500 — Hwy. 515	—	43,907
515	Hwy. 512 — Combermere	20,080	221,383
517	Twp. Rd. (Near New Carlow) — Hwy. 62	—	67,435
518	Sand Lake — Hwy. 69	72,090	399,947
519	Hwy. 121 — Redstone Lake	4,474	169,485
520	Burk's Falls — Ardbeg	1,349,144	261,043
522	Hwy. 11 — West of Loring	3,624,139	363,817
523	Lyell Twp. Line — Hwy. 60	65,734	83,243
524	Hwy. 522 — Hwy. 534 (E. of Restoule)	27,103	26,838
526	Hwy. 69 — W. of Britt	—	13,664
527	Jct. Hwys. 11 & 17 Northerly	930,145	499,141
528	Wolseley Bay — Hwy. 64	158,096	52,143
528A	Pine Cove Landing — Hwy. 528	—	22,241
529	Hwy. 69 — Hwy. 69 (Magnetawan River)	—	161,906
529A	Hwy. 529 — Bayfield Wharf	—	17,823
530	Hwy. 519 — Hwy. 35 (Carnarvon)	12,024	59,837
531	Bonfield — Hwy. 17	—	13,597
532	Hwy. 11 (S. of Bracebridge) — Hwy. 69	26,303	42,427
533	Mattawa — Hwy. 63	81,636	205,341
534	Powassan — Restoule	51,653	168,306
535	Hwy. 64 — Riviere Veuve	177,590	202,734
537	Hwy. 69 — Hwy. 17 (Wahnapiatae)	258,698	117,014
538	Algoma Miners Loop	—	22,844
539	Hwy. 64 — Warren	190,350	191,672
539A	Hwy. 539 — Tert. Road 805	—	45,292
540	Little Current — Meldrum Bay	295,444	516,286
540A	Hwy. 540 — Barrie Island	—	18,429
542	Hwy. 68 — Gore Bay	248,171	339,783
542A	Hwy. 542 — Tehkummah	—	8,353
546	Hwy. 17 — Mississagi Prov. Park	251,653	284,973
547	Hwy. 101 — Hank Jct.	—	16,530

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
548	Around St. Joseph Island — Hwy. 17	2,570	252,011
549	Lake Panache — Hwy. 17	84	54,085
550	Sault Ste Marie — Gross Cap	1,015,877	27,406
551	Province Bay — Hwy. 540	84,566	78,322
552	Hwy. 556 — Twp. Road (E. of Hwy. 17)	146,810	60,428
552A	Hwy. 552 — Hwy. 17	—	4,351
553	Massey — Bull Lake Lodge	—	141,774
554	Hwy. 546 — Hwy. 129	248,029	47,665
555	Magog Lake — Hwy. 557	—	35,968
556	Hwy. 17 (Heyden) N. Easterly	85,133	366,718
557	Blind River northerly	28,701	66,750
558	Haileybury — Montreal River	—	75,956
559	Hwy. 69 Nobel — Hwy. 69	—	160,377
560	Hwy. 11 — Hwy. 144 (S. of Gogama)	266,580	582,585
560A	Westree — Hwy. 560	—	28,043
561	Bruce Mines — Hwy. 638	—	76,313
562	Hwy. 11 (E. of Thornloe) — Hwy. 65	--	39,083
563	Batchawana — Hwy. 17	—	14,789
564	Blanche River Bridge — Hwy. 112	—	30,152
565	Pte Aux Pins — Hwy. 550	207,322	4,351
566	Matachenan — Ashley Mine	89,150	85,039
567	E. of Silver Centre — N. Cobalt	—	96,003
568	Hwy. 11 — Kenogami	—	6,576
569	Hwy. 11 — Hwy. 11 (S. of Englehart)	102,749	77,969
570	Sesekinoko — Hwy. 11	—	8,465
571	Hwy. 562 — Earlon	—	16,040
572	Hwy. 11 Ramore — Hwy. 101	—	66,890
573	Charlton — Hwy. 11	129,856	58,061
574	Cochrane — Norembega	1,737	113,641
575	Jct. Hwy. 17 — Jct. Hwy. 64	9,463	108,670
576	Hwy. 101 — Kam-Kotia Mine	—	67,310
577	Hwy. 101 — Iroquois Falls	239,914	63,316
578	Iroquois Falls — Hwy. 11	—	22,377
579	Cochrane — Gardiner	358,718	96,158
580	Hwy. 11 — Lake Nipigon	—	32,835
581	Hwy. 11 — Remi Lake	—	14,509
582	Hwy. 11 & 17 — Loop At Hurkett	—	14,903
583	Mead — Lac Ste Therese	80,414	218,319
584	Hard Rock Mine — Nakina	1,564,589	180,894
585	Hwy. 11 — Pine Portage	—	80,230
586	Hwy. 11 — Lower Shebandowan Lake	—	11,819
587	Silver Islet — Hwy. 11 & 17	83,475	176,504
588	Stanley — Round Lake Road	865,777	281,477
589	Hwys. 11A & 17A — Dog Lake Road	65,387	117,744
590	Hwy. 130 — Hwy. 588 (Nolalu)	10,868	62,551
591	Hwy. 589 northerly	20,000	17,550
592	Hwy. 11 (Novar) — Hwy. 11	—	93,850
593	Hwy. 61 — Hwy. 588 (Nolalu)	69,258	160,076
594	Dryden — Hwy. 17	151,861	73,998

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
595	Hwy. 597 — Hwy. 590	322,053	197,594
596	Kenora — N. of Minaki	48,842	226,387
597	Pardee — Hwy. 608	71,116	64,856
598	Hwy. 604 — Hwy. 128 (N. of Kenora)	500	9,065
599	Ignace — Tert. Road 808	6,007,681	736,978
600	Hwy. 71 — Rainy River	—	415,031
601	Hwy. 17 — Dryden	—	131,474
602	Fort Frances — Emo	—	93,336
603	Hwy. 17 — Dymont	—	9,400
604	Hwy. 17 — Kenora Airport	—	17,795
605	Hwy. 17 — Eton — Rugby	—	47,347
607	Hwy. 69 — (Big Wood) — Hwy. 64	—	44,171
607A	French River — Hwy. 607	—	7,319
608	Hwy. 61 — Hwy. 595 (S. Gillies)	300,369CR	108,858
609	Hwy. 105 — Clay Lake	—	35,488
610	Hwy. 67 — Hwy. 101 (Hoyle)	6,058	55,520
611	Hwy. 602 (Sherwood) Northerly	—	49,241
612	Hwy. 103 (Mactier) — Hwy. 69	—	13,808
613	Hwy. 602 — Lake Despair	75,846	184,143
614	Hwy. 17 — Manitouwadge	—	151,813
615	Hwy. 17 — Burditt Lake	—	44,991
616	Hwy. 101 — Palomar	—	8,686
617	Hwy. 11 (Stratton) — Hwy. 600	40,462	67,563
618	Red Lake — Madsen	7,671	24,509
619	Hwy. 11 (Pinewood) — Hwy. 621	—	103,498
620	Hwy. 62 — Hwy. 28 (Apsley)	800,709	189,134
620A	Hwy. 28 — Hwy. 620	—	1,533
621	Hwy. 11 — Lake of the Woods	12,932	138,524
622	Hwy. 11 (Atikokan) Northerly	—	27,222
623	Hwy. 11 — Sapawe	—	11,104
624	Hwy. 11 — Larder Lake	—	147,797
625	Caramat — Hwy. 11	169,958	105,876
627	Heron Bay — Hwy. 17	—	22,620
628	Red Rock — Hwys. 11 & 17	—	15,760
629	Timmins — Timmins Airport	—	27,359
630	Kiosk — Hwy. 17	3,908	113,901
631	Hwy. 17 — Hwy. 11	358,222	548,749
632	Hwy. 118 — Rosseau	—	38,139
633	Hwy. 11 — Kawene	—	13,253
634	Smooth Rock Falls — Fraserdale	757,325	279,481
635	Hwy. 17 — Ottawa River Bridge	—	7,195
636	Hwy. 11 — Frederick House	—	13,315
637	Hwy. 69 — Killarney	14,697	271,660
638	Dunns Valley — Echo Bay	149,314	141,119
639	Hwy. 108 — Hwy. 546	—	82,354
640	Hwy. 571 — Earlton Airport Entrance	—	7,574
641	Hwy. 17 — Pellatt	4,238	68,552
642	Hwy. 599 — Sioux Lookout	49,868	159,477
643	Hwy. 584 — Twp. Road to Cavell	—	54,491

MINISTRY EXPENDITURE BY HIGHWAY

SECONDARY HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
644	Hwy. 69 (Pte. Au Baril) Westerly	—	5,743
645	Hwy. 529 — Bing Inlet	—	20,120
646	Pickle Crow — Central Patricia	—	23,998
647	Hwy. 17 — Blue Lake Prov. Park	—	17,123
648	Dyno Mine — West Jct. Hwy. 121	—	140,624
649	Bobcaygeon — Hwy. 121	—	59,668
650	O.N.R. Right-of-Way — Hwy. 112	—	20,941
651	Hwy. 101 — Missanabie	363	151,988
652	Wade Lake — Hwy. 574	882	48,519
653	Portage Du Fonte Bridge — Hwy. 17	481,511	38,340
654	Hwy. 11 — Nipissing	445	90,013
655	Timmins — Ward Kidd Twp. Bdry.	2,089,469	58,192
656	Hwy. 533 northerly	—	14,246
657	Gold Pines — Hwy. 105	—	12,422
659	Hwy. 604 — Hwy. 128	—	95,234
660	Bala — Hwy. 103	36,020	58,850
661	Gogama — Hwy. 144	—	14,765
663	Hwy. 11 (W. of Hearst) N'y	—	14,922
664	Hudson — Hwy. 72	—	35,924
665	Hwy. 17 — Richan	—	87,889
666	Kenora — Redditt	18,854	91,028
667	Hwy. 129 — Sutton	—	113,511
TOTAL SECONDARY HIGHWAYS		\$ 26,801,208	\$ 17,582,110

TERTIARY ROADS

801	Hwy. 11 — Namewanikan River	—	42,184
802	Hwy. 11 — Burchell Lake	—	32,644
803	Hwy. 575 — (Hwy. 101 — 3 mi. South)	—	10,979
804	Hwy. 105 — Lower Manitou Falls	—	44,654
805	Hwy. 539A (River Valley) — Pond Lake	—	174,935
808	Hwy. 646 — Otosilwin River	162,259	182,113
809	Hwy. 564 — End of Hwy.	—	11,712
810	Hwy. 553 — Ritchie Falls	—	63,243
811	Tert. Road 800 Northwesterly	—	32,695
812	Manitou Road — Hwy. 11 N'y	2,342,500	117,510
TOTAL TERTIARY ROAD		\$ 2,504,759	\$ 712,669

ACCESS AND INDUSTRIAL ROADS

708	Marchington Lake Road	1,820,985	—
716	Alternate Route to Wasaga Beach	5,827	—
773	Garden Lake Road	34,573	—
784	Arterial Rd.	240,793	—
788	Moosonee Access Road	2,008	—
794	Service Roads	161,658	—
795	Sherman Mine Road	—	976
796	London East Industrial Access Rd.	40,059	—
799	Caramat-Manitouwadge Road	—	58,275
TOTAL ACCESS & INDUSTRIAL ROADS		\$ 2,305,903	\$ 59,251

MINISTRY EXPENDITURE BY HIGHWAY

UNINCORPORATED TOWNSHIPS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
99	Statute Labour Boards	161,588	116,929
9	Local Roads Boards	1,867,972	2,267,412
7	Special Settlers	65,508	182,603
2	Indian Reserves	98,260	101,404
TOTAL UNINCORPORATED TOWNSHIPS		\$ 2,193,328	\$ 2,668,348
SPECIAL PROGRAMS			
449	Tobermory Ferry	2,907	—
450	Other Ferry Service	—	1,732,356
731	Sudbury By-pass	7,232	46,658
732	North Bay By-pass	876,955	—
735	Kitchener-Waterloo Expressway	1,044	—
762	East Main St. Tunnel	14,525	49,973
765	Townline Road Tunnel	—	23,014
787	Hydro Development Road	48,788	—
790	Hydro Development Road	720,497	—
797	Airstrip Development	2,929,804	829,892
927	Spring Gardens — Bridge	358,722	—
952	Sidewalks	8,991	—
954	Storm Sewers	21,608	—
955	Commuter Rail	28,625	—
7087	E. C. Row Expressway	2,472,382	87,020
7118	Brantford Expressway	—	18,874
	Service Centres		
7170	Twp. of Grenfell	—	7,319
8905	Lands & Buildings	2,065,853	311,208
8954	Weigh Scales	162,897	—
	Development Roads	5,870,614	—
	Connecting Links	16,413,530	1,165,043
TOTAL SPECIAL PROGRAMS		\$ 32,004,974	\$ 4,271,357
HIGHWAY TOTALS		\$249,743,529	\$103,757,744
Sundry Unallocated, District Office			
Administration, Engineering			
Building, Inventory Charges, etc.		(60,057,053) CR	16,689,923
TOTAL EXPENDITURE		<u>\$189,686,476</u>	<u>\$120,447,667</u>

**CONVICTIONS REGISTERED
UNDER THE
HIGHWAY TRAFFIC ACT**

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1976	1977
6	Fail to register a vehicle	2,704	4,758
7 (1)	False statement	95	63
7 (2)	Fail to notify new address	3,271	2,997
8	Fail to have number plates	11,356	20,982
9	Violations as to number plates	5,323	5,623
10	Improper use of number plates	912	1,195
13	Fail to have operator's licence	15,624	14,182
14	Fail to produce operator's licence	17,015	17,420
16	Fail to have chauffeur's licence	248	95
17	Fail to produce chauffeur's licence	1,131	670
18	Operation of motor vehicle by person under 16	309	197
27 (2)	Unlawful possession of permit	43	36
27 (3)	Unlawful possession of licence	218	237
30 (b)	Driving while licence is suspended H.T.A.	273	601
35	No garage licence	31	11
36	Record of wrecked vehicle violation	56	48
37	Improper lights	11,803	11,650
39	Defective brakes	1,740	1,640
41	Faulty equipment (mirror, windshield, etc.)	939	860
47	Driver's view obstructed	188	210
48	Windows obstructed	1,728	1,381
49	Excessive noise/smoke/fumes	27,319	26,966
50	No slow-moving-vehicles sign	69	53
53	Fail to have proper trailer attachments	906	754
55 (2)	Unsafe vehicle	5	13
55 (3)	Failing to submit to vehicle inspection	1,151	1,617
57	Drive unsafe vehicle	4,019	4,804
58	Certificate of mechanical fitness violation	125	29
61	No name of owner on commercial vehicle	814	1,377
62	Drive/ride motorcycle no safety helmet	1,384	2,309
63A (2)	Remove/modify/inoperative seat belt assembly	842	1,083
63A (3)	Failure/improper use seat belt assembly — driver	7,893	29,233
63A (4)	Passenger — failure to ensure seat belt use	1,652	4,656
63A (6)	Driver — failure to ensure passenger seat belt use	147	427
64	Overweight	108	122
65 (6)	Special permit violation	583	508
66 (1)	Overload in excess of permit	3,917	1,886
66 (2)	Fail to produce commercial ownership permit	1,746	1,834
66 (4)	Spring Regulations — Overload	56	60
68	Overhanging load	2,044	2,166
70	Excessive width or length of vehicle	1,431	1,386
82	Speeding 30 mph or more over limit	6,587	6,869
	Speeding more than 19 less than 30 mph	48,411	47,308
	Speeding more than 10 less than 20 mph	224,774	191,074
	Speeding under 11 miles per hour	529,268	405,047
	*Speeding 50 km/h or more over the limit		1,461
	*Speeding more than 29 less than 50 km/h		17,145
	*Speeding more than 15 less than 30 km/h		58,812
	*Speeding under 16 km/h per hour		69,408
83	Careless driving	17,446	18,207
85	Unnecessary slow driving	186	173
86	Fail to obey signal of police officer	294	363
87	Fail to yield right of way	305	254

* km/h effective September 6, 1977

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1976	1977
88	Fail to stop at through highway	58,377	55,394
90	Fail to obey yield sign	959	847
91	Fail to yield — from private road	7,632	7,722
92	Pedestrian crossover violation by driver	5,689	6,115
93 (1)	Improper right turn at intersection	3,631	4,139
93 (2)	Improper left turn at intersection	5,305	5,574
93 (3)	Improper left turn into intersecting highway	4,265	4,846
93 (4)	Improper left turn from one-way highway	1,849	2,163
93 (5)	Improper left turn into one-way highway	508	393
93 (6)	Improper left turn from one-way highway to one-way highway	1,022	889
94 (1)	Fail to signal for turn	12,393	13,372
94 (2)	Fail to signal — moving from parked position	3,427	3,435
94 (4A)	Improper manual signal	2	10
94 (5)	Improper directional signal	78	155
94 (6)	Improper use of signaling device	83	77
94 (7) (7B)	Fail to signal	144	141
95	Prohibited U-turns	691	792
96 (5)	Disobey red signal light	46,555	48,860
96 (6)	Disobey an amber	14,496	14,712
97 (7) (8) (9)	Flashing red-amber-green arrow	1,639	1,757
96 (10)	Fail to give right-of-way to pedestrian	947	1,094
96 (11)	Prohibited turn	33,465	29,865
96 (19)	Disobey traffic signal	0	2
97	Drive right side of multi-lane highway	309	257
98 (1) (2)	Fail to share the road	2,824	2,821
98 (3)	Fail to move to right	229	171
98 (4)	Vehicle or horsemen overtaking others	516	513
98 (5)	Horsemen or vehicles overtaking bicycles or tricycles	29	19
98 (6)	Improper passing	20	14
98 (7)	Improper passing	1,593	1,570
99	Drive left of centre of highway	2,208	2,127
100 (1)	Passing to right of vehicle	9	22
100 (2)	Unsafe passing to the right	3,451	3,404
102	Wrong way on a one-way street	7,208	7,360
103 (a)	Unsafe lane change	6,005	6,113
103 (b)	Drive in centre lane of three lane highway	58	64
103 (c)	Fail to drive in slow moving traffic lane	1,710	1,889
104 (a) (b)	Improper driving on divided highway	1,062	1,313
105 105 (1)	Following too closely	18,259	18,276
105 (2)	Following too close in commercial vehicle	343	253
106 (1)	Fail to yield to fire department vehicle etc.	280	328
106 (2)	Following a fire department vehicle	19	18
109	Crowding driver	524	476
110	Fail to stop for crossing (signal)	216	207
111	Drive through, under or around railway barrier	199	193
112	Improper opening of vehicle door	475	516
113 (1)	Improper approach or passing a stopped streetcar	150	176
113 (2)	Pass streetcar on left side	31	57
114	Improper driving when approaching horses	2	0
115	Fail to use passing beam	1,772	1,398
116	Improper parking on highway	1,871	1,246
116 (8)	No warning lights on commercial vehicle	29	42
116 (9)	No Flares	25	62
116 (10)	Vehicle interfering with traffic	0	686

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1976	1977
117	Racing	176	177
119 (b)	Failure to stop school bus or public vehicle at railway crossing	23	22
120 (2)	Fail to stop for school bus	3,123	3,453
120 (3)	School bus: Fail to actuate signals	26	42
120 (5)	School bus: Failure to cover signals and signs	17	5
124	Littering highway	793	1,435
125 (2)	Fail to obey a direction sign	4,141	3,715
139	Fail to report an accident	3,071	3,394
140	Fail to remain at the scene of an accident	2,613	2,794
141	Fail to report damage to highway property	590	603
	Other offences	<u>302</u>	<u>3,121</u>
TOTAL		1,227,947	1,254,966

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

424	School bus violation	20	1
418 (13) (14)			
(15) (16)	Number plate violation	143	619
418 (24)	Instruction permit violations	183	951
418 (25) (2)	Drive motorcycle, no endorsed licence	4,318	3,435
418 (27)	Restricted licence violation	702	643
418 (28)	Fail to notify name/address change	3,735	3,738
418 (29) (1)			
a b c d e	Driver licence violation	653	253
418 (39)	Seat belt violation	3	2
418 (40) (1) (2)			
(3)	Motorcycle violation	231	280
421 (4)	Improper parking	118	134
433 (14)	Prohibited use of studded tires	164	155
	Others	<u>2,299</u>	<u>3,422</u>
TOTAL		12,569	13,633

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

203	Criminal negligence causing death	8	14
204	Criminal negligence causing bodily harm	6	7
233 (1)	Criminal negligence	104	87
233 (2)	Fail to remain	2,123	2,092
233 (4)	Dangerous driving	1,468	1,644
234	Drive ability impaired	24,333	23,019
235 (2)	Fail to take breathalyzer	3,379	3,053
236	Over .08 alcohol	14,907	16,088
238 (3)	Drive while disqualified	8,809	9,690
	Others	<u>3</u>	<u>0</u>
TOTAL		55,140	55,694

SUMMARY OF CONVICTIONS

Criminal Code	55,140	55,694
Highway Traffic Act	1,227,947	1,255,790
Regulations H.T.A.	12,569	13,633
Municipal bylaws	34,108	32,964
Motor Vehicles Accident Claims Act	12,217	12,465
Public Commercial Vehicles Act	<u>957</u>	<u>558</u>
TOTAL	1,342,938	1,371,104

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCE	1976	1977
2 (1)	Drive or permit to drive unregistered vehicle	234	351
2 (2)	Fail to register	40	0
2 (3)	Fail to provide evidence of issue of permit (no plate)	409	54
2 (7)	Fail to display registration number	27	248
2 (8)	Fail to display evidence of permit	127	328
3 (1)	Make false statement	1	0
3 (2)	Fail to notify change of address	1	0
3 (3)	Fail to notify change of ownership	4	31
4	(Plate) — Registration number obstructed	3	0
4 (2) A & B	Use defaced or altered plates	0	0
4 (2) C	Improper plates	0	0
5	Drive on prohibited highway	202	152
6 (2)	Drive in area not designated	3	5
7	Improper crossing of roadway	6	0
7 (1)	Person under age 16 drive on highway	1	0
7 (2)	Permit person under age 16 to drive on highway	0	19
7 (3)	No drivers licence	43	31
7 (5)	Permit unlicensed person to drive	4	0
8 (1)	No operators licence	184	196
8 (2)	Drive across highway no licence	2	13
11 (1)	Operate (or permit operation) uninsured vehicle	112	322
11 (2)	No insurance	118	14
11 (3)	Fail to produce evidence of insurance	99	109
11 (4)	Produce false evidence of insurance	0	0
12 (1)	Fail to report collision	14	24
12 (2)	Police officer fail to forward report of accident	1	0
13 (1)	Speeding	21	53
13A	Careless driving	66	53
14 (1)	Fail to produce licence	58	46
15 (1)	Improper muffler	3	2
16	Towing on serviced roadway prohibited	6	6
17	No helmet	186	247
	Others	19	79
	Total	1,994	2,383

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

2	Disobey police officer	4	0
3	Fail to yield to vehicle on right	0	0
4	Disobey sign	6	21
5 (1) (b)	Fail to yield — from adjoining property	4	0
5 (2)	Improper crossing of roadway	0	0
6 (3)	Improper left turn	1	2
7 (1)	Fail to signal	1	3
7 (2)	Fail to signal from stopped position	0	0
7 (3)	Improper signal	0	0
7 (4)	Fail to signal stop	0	0
8 (a)	U-Turn — no clear view	0	0
8 (b)	U-Turn — railway crossing	0	0
8 (c)	U-Turn — on hill — no clear view	0	0
9	Disobey traffic signal light	0	0
10 (1)	Fail to share roadway	2	0
10 (2) (b)	Passing when roadway not clear	0	0

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

SECTION	OFFENCE	1976	1977
11	Drive left of centre	2	3
12	Pass on right — not in safety	0	0
13	Following too closely	0	1
14 (1)	Fail to stop at railway crossing	0	1
14 (2)	Cross railway improperly	0	0
15 (1) (a)	Park on roadway	0	0
16	Speeding	1	8
17	Careless driving	5	5
19 (a)	Drive on Kings Highway (prohibited)	0	0
20	Improper lights	0	0
21	Improper or no lights	13	5
	Others	71	12
	Total	120	61

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

233 (2)	Fail to remain	0	1
233 (4)	Dangerous driving	11	0
234	Impaired driving	25	10
235 (2)	Fail to take breathalyzer	0	0
236	Over .08 alcohol	3	2
238 (3)	Drive while disqualified	3	7
	Total	42	20

MUNICIPAL BYLAWS (MOTORIZED SNOW VEHICLES)	41	17
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SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	1994	2383
Criminal Code of Canada	42	20
Regulations	120	61
Bylaws	41	17
Total	2197	2481

SUSPENSIONS	1976	1977
-------------	------	------

COURT ORDERED SUSPENSIONS H.T.A.

Careless driving	871	780
Speeding over 30 mph	230	170
Racing	40	31
Fail to remain	168	180
Drive while licence suspended (H.T.A. Section 30b)	33	56
Others	42	60
	1,384	1,277

DEMERIT POINT SYSTEM SUSPENSIONS

15 point accumulation	6,600	7,474
Fail to attend interview	1,769	1,699
As a result of interview	238	172
	8,607	9,345

DISCRETIONARY SUSPENSIONS (H.T.A. — SECTION 27)

Medical or physical condition	1,556	1,702
Operating record	1,404	1,937
	2,960	3,639

SUSPENSION FOR:	1976	1977
Motor Vehicle Accident Claim	5,978	5,756
Failure to pay Judgment	1,182	1,201
Default in payment of traffic fine	<u>44,289</u>	<u>52,600</u>
	51,449	59,557

MANDATORY SUSPENSION H.T.A.

Criminal Negligence	107	86
Dangerous driving	1,394	1,451
Impaired	23,254	20,929
Fail to provide breath sample	3,172	2,728
Blood/Alcohol .08	14,155	14,510
Fail to remain at scene	1,986	1,858
Drive while Disqualified	8,437	8,789
Fail to provide (RDSI)	<u>0</u>	<u>14</u>
	52,505	50,365
TOTAL	<u><u>116,905</u></u>	<u><u>124,183</u></u>

DRIVER DEMERIT POINT SYSTEM	1976	1977
6 POINT LEVEL		
Advisory letters issued	113,266	119,632
9 POINT LEVEL		
Interviews conducted	27,129	39,907

SUSPENSION

Drivers who reached suspension level through point accumulation	6,600	7,474
Drivers suspended for failure to attend interview	1,769	1,699
Drivers suspended as a result of interview*	<u>238</u>	<u>172</u>
Total suspensions under point system	8,607	9,345

*Because of unfavourable records and/or attitudes

LICENCE CANCELLATION

Licences cancelled due to unsatisfactory driver re-examination at time of point system interview	6	11
--	---	----

DRIVER MEDICAL REVIEW	1976	1977
Total Cases Reviewed	5,510	166,892*
Satisfactory Reports	4,485	161,697
Unsatisfactory Reports	1,025	1,135
Waivers under Classified Licensing System	—	4,060**

*Includes medical reports required under new Classified Licensing System Implemented in 1977.

**Medical standards waived during conversion year. (O. R. 906/76 Section 12 (1))

DRIVER OPTOMETRICAL REVIEW HIGHWAY TRAFFIC ACT (SECTION 144)

Total Cases Reviewed	1,912	2,992
Satisfactory vision reports filed	412	922
Drivers required to wear prescribed lenses while driving — no previous restriction	1,425	1,982
Unsatisfactory visual acuity	67	84
Unsatisfactory visual field	8	4

SUMMARY SHEET

	1975	1976	1977
NUMBER OF LICENSED DRIVERS IN ONTARIO	4,160,623	4,315,925	4,512,327
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,203,676	1,342,938	1,371,104
Motorized Snow Vehicles	2,103	2,197	2,481
*Motor Assisted Bicycles	1,505	—	—
TOTAL	1,207,284	1,345,135	1,373,585
TOTAL DRIVER LICENCE SUSPENSIONS APPLIED	122,297	116,905	124,183
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED	11,577	10,341	169,884

*Defined as Motor Vehicle January 1, 1976

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ANNUAL REPORT 1978-1979



Ministry of
Transportation and
Communications

TRANSPORT *Roads*

CONSTRUCTION

AIR TRAVEL

research

FERRY SERVICE

driver testing

Telecommunications

VEHICLE LICENSING

GO-TRANSIT



Annual Report 1978-1979

for the
fiscal year
ending
March 31, 1979



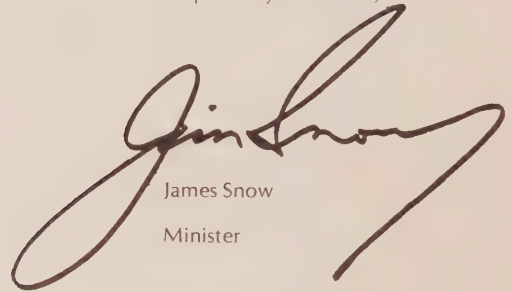
Ministry of
Transportation and
Communications

To: The Honourable Pauline M. McGibbon,
O.D., B.A., L.L.D., D.U. (Ott.)
Lieutenant-Governor of the Province of Ontario

MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before you the Annual Report
for the Ministry of Transportation and Communications for the fiscal
year ending March 31, 1979.

Respectfully submitted,

A large, stylized handwritten signature in dark ink, reading "Jim Snow".

James Snow
Minister



To: The Honourable James Snow
Minister of
Transportation and Communications

Sir:

I have the honour to present the report of the activities of the Ministry
of Transportation and Communications for the fiscal year ending March 31,
1979.

Respectfully submitted,

A handwritten signature in dark ink, reading "Harold Gilbert". The signature is written in a cursive, flowing style with a large, sweeping initial "H".

Harold Gilbert
Deputy Minister

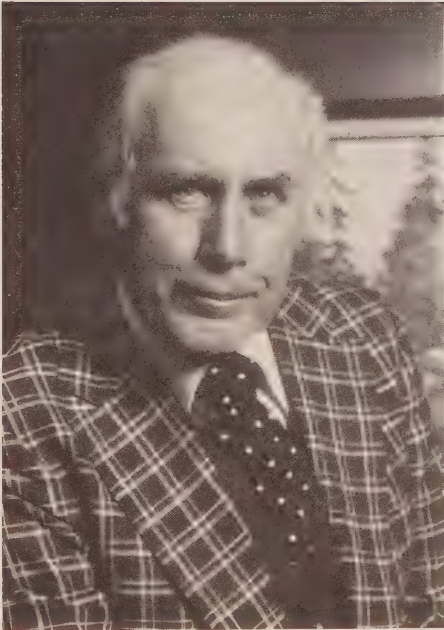


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Deputy Minister's Summary

In the past fiscal year, MTC has continued to provide modern, efficient transportation and communications services for the citizens of Ontario while administering its financial resources in the most efficient manner possible.

And, as in other years, these services were made available through the commendable efforts of MTC staff members throughout the province.

We've continued to assist the Ministry of Northern Affairs and, in conjunction with MNA, provided the necessary planning and supervision of the northern Ontario highway construction program.

During 1978/79, the Ministry spent \$217 million on highway construction while providing an additional \$364 million in subsidies for municipal road building programs. In addition, \$135 million was spent on the maintenance of Ontario's highway system.

Specifically, MTC was involved in the completion of work on 597 kilometres of road in southern Ontario and 694 kilometres in the north.

In the area of transit service, MTC continued to provide subsidies to municipalities under the joint Federal/Provincial Urban Transportation Assistance Program – assistance aimed at constantly improving municipal transit.

The GO Transit system is more popular than ever as a means of commuter transportation. Passengers will be able to take advantage of new \$38 million commuter facilities at Toronto's Union Station, a project begun in 1978 and expected to be completed over the next three to four years. These new facilities will include a new GO concourse, improved ticketing and passenger-handling areas, a shortened route to the TTC subway and new pedestrian entrance.

Initial work was also begun on a \$17 million rail maintenance and storage facility for GO Transit at its existing Willowbrooke location in Mimico.

In the area of ferry services, the province assumed operation of the federally owned "Peelee Islander" which runs between Peelee Island, Sandusky, Ohio, and the Ontario mainland. The ferry provides an essential service for both year-round residents and Peelee Island cottagers while transporting island produce to

mainland markets and carrying supplies back.

Air transportation also plays a major part in MTC's services. And one of the features of this past year's activities was the updating and reprinting of a map for general aviation pilots, a map designed to indicate ground facilities and available services at Ontario airports.

In the north, transportation remains – as always – a key problem. Here, MTC worked closely with MNA on airport construction and improvement to alleviate the unique weather and distance problems. As a result, municipal airports in Cochrane, Iroquois Falls and Wawa now have asphalt runways in the place of former gravel strips. Initial work was begun last year on the construction of an airport at Hornepayne, work funded jointly by both ministries and the township of Wicksteed.

The official opening of the Kashechewan airport also took place last year. Part of the Remote Airport Program, another joint MTC/MNA project, the Kashechewan airstrip is the 14th to be constructed in the north.

Extensive communications facilities are taken for granted in southern Ontario but aren't so common in our north. To counter this situation,

MTC, through the Ontario Government's Remote Northern Ontario Telecommunications project, opened new telephone facilities at Fort Albany, Kashechewan and Attawapiskat, bringing to 26 the number of remote communities provided with reliable telephone facilities.

Driver and vehicle licensing and related areas form a large part of MTC's mandate. Plans were announced last year for the construction of a drivers-and-vehicles centre, complete with off-street test area, at a 30-acre Malport site in northwest Metro. Pending the availability of funds, completion is expected in three to four years.

Three more trucking reciprocity agreements were negotiated during the past 12 months. And, as a result of an agreement with Quebec, for-hire dump trucks can now move freely between Ottawa-Carleton and the Outaouais region in Quebec. Commercial vehicles travelling between Ontario and the two American states of New York and Vermont now share reciprocal benefits. In all, Ontario has reciprocal agreements with 18 U.S. states.

Driver instruction was the subject of a discussion paper released by the Ministry this past year, a paper stressing the need for uniform stand-



One of the remote airports built by MTC at Sandy Lake

ards for commercial driving schools. It also examined possible solutions to this continuous problem.

MTC staff members were actively involved in maintaining school bus inspection program standards. And during a three-week period in the fall of 1978, ministry vehicle inspectors conducted an intensive campaign of spot checks to ensure school bus operators were meeting their responsibilities.

Another series of inspections resulted in the suspension of almost 200 Safety Standard Certificate licences across the province. The crackdown on irregular activities at vehicle inspection station garages revealed safety stickers had been sold though no work had been done on cars and several other garages oversold parts and services.

In conjunction with the Ministry of Industry and Tourism, MTC produced a new edition of the metric road map which included information on travel facilities, hospitals, radio stations and other features. This was followed by a bilingual map redesigned to accommodate both French and English panels, legend and text.

MTC has continued to be involved in testing new materials or ideas designed to make driving conditions safer and more convenient. The use of more durable pavement marking materials and the reduction of salt on several snow-covered highways were two such tests.

Car and van pooling has become a viable alternative for commuters in Metro Toronto since MTC initiated a Share-a-Ride car-pooling program

for its Downsview employees. It could, hopefully, reduce traffic congestion, save money for those involved and conserve energy. As an extension of this program, MTC launched an experimental van-pooling project. It leased three 12-passenger vans for use between three locations outside Metro and MTC's Downsview offices. Coordination of the overall project was undertaken by MTC, but each van team pays for the leasing and makes its own rules regarding vehicle usage.

Another MTC effort to aid commuters was the proposal to construct several commuter parking lots at selected highway interchanges near Metro. Intended to promote car and van pooling and greater use of public transit, the sites will be monitored for the possible expansion of the program.

In addition, MTC completed a film entitled "Dice in a Box" illustrating the advantages of wearing seat belts. Another set of films on the problems of drinking and driving was begun

during the year and scheduled for completion this summer.

In the area of legislation, amendments to The Highway Traffic Act were introduced which included measures to curb tailgating, drinking and driving, and accidents at pedestrian crosswalks.

Also, the police now have the authority to close highways by posting signs or traffic barriers. Prior to this, police officers had to be on the site where the highway was being closed, posing manpower problems.

Aircraft forced to make an emergency landing on a highway are now permitted to take off again if the pilot and another qualified pilot agree to the craft's airworthiness. Before the introduction of this legislation, a plane making an emergency landing on a highway had to be disassembled and towed to an airstrip.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year 1978/79 with comparative figures for the preceding year:

	Fiscal Year Ending	
	March 31, 1978	March 31, 1979
Ministry Administration	\$ 27,139,628	\$ 29,687,697
Planning, Research and Development	33,135,710	30,405,841
Safety and Regulation	32,541,010	35,685,063
Provincial Roads	383,344,276	413,640,331
Provincial Transit	56,881,315	50,855,090
Air	2,165,404	3,423,442
Municipal Roads	344,583,236	364,381,535
Municipal Transit	153,522,105	137,938,207
Communication	1,722,356	2,365,175
TOTAL GROSS EXPENDITURE	\$1,035,035,040	\$1,068,382,381

Deputy Minister's Office

Communications Division

The communications goal of the Ontario government is to ensure the diverse interests of the people of Ontario are fully represented in developments associated with radio and television broadcasting, cable and special purpose video, data transmission systems, telephone and telegraph services and the use of communications satellites.

To this end, the Communications Division endeavours to ensure the provision of adequate, efficient and reliable communications services and the development of strong communications ties within and between communities and regions of the province. In addition, the division supports the planning of systems and services responsive to the social, cultural, educational and economic goals of the government.

During the past fiscal year, the Communications Division undertook a wide range of activities including:

- Provided technical, analytical, and accounting support to the Ontario Telephone Service Commission in its regulatory activities and engineering assistance to the independent telephone companies operating in Ontario;
- Sought means to improve broadcasting and cable services in communities on the north shore of Lake Superior and to the communities east and west of Thunder Bay;
- Put forward major representations to the Canadian Radio-Television and Telecommunications Commission (CRTC) on such cable and broadcast issues as broadcasting services in northern Ontario;
- Put forward position papers to the federal Department of Communications regarding the efficient utilization of the frequency spectrum in Ontario generally and regarding the congested areas of southern Ontario especially;
- Continued negotiations with the

federal government – both on a bilateral level, and in the context of the constitutional discussions – to achieve a better balance in the distribution of government responsibilities, particularly regarding provincial regulation of cable distribution systems;

- Participated in the federal/provincial working group on Telecommunications Industry Structure/Competition which developed policy objectives and principles to determine what telecommunications services should be monopoly in nature; which services should be provided on a competitive basis; and which industry structure was most appropriate to deliver such services;
- Completed phase I of a major review of policy and legislation affecting the 35 independent telephone systems operating within the province;
- Funded, in conjunction with the Ministries of Consumer and Commercial Relations and the Attorney General, a report on policy and legislative response to electronic funds transfer as part of the broader assessment of this issue;
- Initiated studies concerning the development of an industrial strategy for the communications sector;
- Assumed the responsibility for the day-to-day operation and then sale by tender of the assets of an independent telephone company which became unable to provide an adequate level of service to its subscribers;
- Developed a computerized methodology to survey rural telecommunications needs and evaluate costs of implementing their satisfaction; and undertook pilot applications of this process jointly with Ontario independent telephone systems;
- Continued application of telecommunications techniques to vehicular traffic management and surveillance, and undertook application of intra-Ministry teleconferencing

as a communications/transportation substitutability pilot project;

- Afforded expert assistance to Ontario's independent telephone industry in the introduction of digital operational techniques;
- Participated with the federal government and the telecommunications carrier and manufacturing industries in the terminal interconnection task force;
- Proceeded with in-depth analysis of potential fibre optic and satellite telecommunications technologies in Ontario;
- Submitted an Ontario Government policy brief to the Clyne Commission on the Implications of Telecommunications for Canadian Sovereignty

Strategic Policy Secretariat

The Secretariat's purpose is to support the Minister, Deputy Minister and the Strategic Policy Committee (SPC) in the development and implementation of Ministry strategic policy and the management of the committee's daily business. During the past year the Secretariat has:

- Managed the business of the SPC, the Ministry's senior executive committee;
- Maintained liaison with the central agencies of government and other ministries;
- Organized and managed the strategic policy development process leading to the publication of the Ministry's Strategic Planning Guidelines, 1980-85;
- Further developed the concept of program long-range planning and assisted the Program and Resources Planning Committees in the continuing task of implementation of the strategic planning process;

- Coordinated surveys and analyses of the external economic, social and institutional environment in which the Ministry functions as reported in the Ministry's Position and Prospects Summary;
- Coordinated Ministry responses to briefs and submissions received from associations and the public and to requests for policy-related information from government sources.

Priority Development Branch

This branch is responsible for the development and management of the Ministry's current and long-range capital construction programs and ensuring maximum effectiveness of legislated funds to be expended. Long-range programs for proposed transportation systems are developed by a priority methodology which analyses and recommends viable programs within financial and planning period limits.

The advance program consisted of 2,508 projects at the end of the fiscal year. Of these, 286 were added during the year. Approximately 1,054 groups of projects had active pre-engineering schedules. During the year, 122 contracts were advertised of which 118 were awarded.

Management Improvement Branch

The mandate of this branch is to optimize Ministry resource utilization and management's effectiveness by improvements to organization, operations, practices, procedures and systems.

Major areas of involvement during the past year were:

- Products and services reviews;
- Privatization and equipment repairs;
- District, region and head office maintenance and municipal responsibility studies;

- Performance budgeting coordination;
- Follow-up on administrative amalgamation of regional engineering and drivers and vehicles operations.

Products and services reviews were conducted to evaluate their effectiveness in the achievement of the program's objectives. Factors reviewed included quality, quantity, service levels, utilization, costs and necessity. Several reviews were undertaken and initial results indicated worthwhile economic benefits could be achieved when recommendations are implemented.

Privatization studies of Ministry activities, specifically equipment repairs, were extended to all district repair garages. Due to varying local conditions, economic benefits are expected to vary from district to district. These studies should be completed in 1979/80.

The first phase of the review of district, region and head office maintenance and municipal responsibilities was completed late in the year. Revised criteria for district evaluation was recommended and approved.

Coordination of performance budgeting implementation was directed to regional engineering and right-of-way operations. Reporting was scheduled to begin April 1, 1979.

Several matters required a follow-up in 1978/79 subsequent to the amalgamation of regional engineering and drivers and vehicles operations. This review was a joint effort of the Management Improvement

Branch and drivers and vehicles and was completed satisfactorily.

Remote northern transportation organization and operations were reviewed and some recommended changes were approved and are currently being implemented. Several other minor organizational reviews were also conducted and implemented during the year.

Public and Safety Information Branch

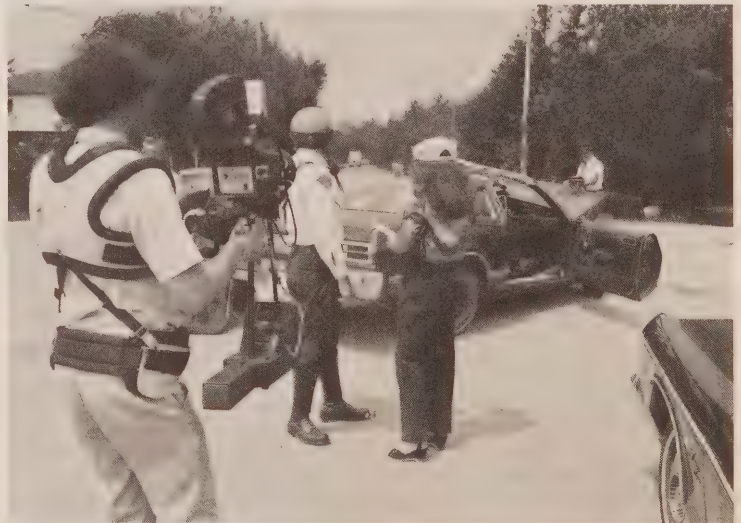
The Public and Safety Information Branch is responsible for the Ministry's external communications program.

In the past year, it answered over 260,000 telephone requests for up-to-date road information and responded to between 50,000 and 60,000 telephone requests for information. In addition, staff replied by mail to approximately 1,600 letters requesting information.

Over 6,000,000 pieces of safety-related information were produced by the branch during the year, including brochures, booklets and periodicals such as the Ontario Traffic Safety Bulletin and MTC News and the curriculum for all of the province's separate and public schools.

The branch also produces in-house radio and TV commercials as well as several other audiovisual teaching aids.

The branch has always been active in the production of informational



Filming of "Dice in a Box"

films. "Dice in a Box", graphically depicting the benefits of seat belt use, was completed. It traces a day in the life of coroner Dr. Hedley Smith of Simcoe County as he investigates an accident in which the unbelted driver was killed. Another film focussing on the problem of drinking and driving for the Attorney General's Ministry was initiated.

Eighty-two speeches and statements for the Minister, Deputy Minister and other MTC officials were researched and written by branch staff members.

News releases and media contact are standard functions.

Other branch responsibilities include the planning and operation of the "Safety Caravan" at fall fairs, winter carnivals and similar events; organizing official functions and opening ceremonies; and planning and staffing the large Ministry display at the Canadian National Exhibition.

Office of Women's Programs

The Office of Women's Programs was established on a full-time basis in February, 1976, to address the Ontario Government's commitment to policies on Affirmative Action. It has continued to receive high profile in the Ministry and has its own cost centre. The mandate during the 1978/79 fiscal year consisted primarily of a continuation of the objectives

and activities of the previous year, highlighted by:

- Initiated and recommended a policy statement regarding the purpose, major accomplishments and future direction of the Affirmative Action program;
- Recommended the development of a lunch-time series explaining the various functions of the Ministry and its career opportunities, a series which is now coordinated by Personnel Branch;
- Participated as a full-time member of the middle management staff committee and the manpower administration committee for the secretarial module;
- Participated in on-campus recruitment of third-year civil engineering students and survey science students for summer employment;
- Participated in the orientation seminar for non-engineering and civil engineering graduates;
- Sponsored several one-half day personal development seminars for all female staff at head office and in the southwestern region;
- Prepared and distributed a report entitled "Affirmative Action Program: A Statistical Overview - 1976/77/78";
- Produced bi-monthly newsletters

and distributed them to all female employees in the Ministry;

- Were instrumental in obtaining the participation of one woman in the fourth professional development program;
- Presented five noon-hour programs in conjunction with the Affirmative Action Council;
- Arranged council meetings in the four head office areas and five regions with the assistance of council members;
- Developed and distributed an information brochure entitled "How Are You Handling the Employment Interview?" with the assistance of council members and Personnel Branch;
- Sponsored the annual Affirmative Action unit representatives' conference for 60 unit representatives from across the province;
- Fulfilled the presidential and secretarial responsibilities for the government's Affirmative Action Council for eight months of the fiscal year;
- Participated in the organization and presentation of three regional information workshops and chaired "Taking Stock, '78";
- Compiled, edited and distributed the second annual report 1977/78 for the government's Affirmative Action Council.

Planning, Research and Development

Planning and Development Division

This division is responsible for the program development, planning and evaluation services required for the management of the Ministry's transportation programs; for the provincial management of the municipal road, municipal transit and air services programs; and for the development of environmental policies.

For the most of the 1978 fiscal year, the Municipal/Provincial Transportation Branch reported directly to the Assistant Deputy Minister of Planning, Research and Development. Toward the end of the fiscal year, the branch was again joined with the remaining offices in the division.

Municipal/Provincial Transportation Branch

This branch is responsible for the program planning and evaluation in the municipal roads, transit, air services and provincial roads programs as well as program management in the municipal roads, transit and some of the air services programs. Responsibilities also include the administration and development of environmental policies, corridor control policies on provincial roads, and all policies in the municipal roads, transit and air services programs.

The branch comprises five offices: Municipal Roads, Transit, Aviation Services, Provincial Roads Planning and Environmental.

Municipal Roads Office

This office is responsible for program development, evaluation and policy, as well as overall budget control for all municipal road subsidy programs.

During the year, 815 municipalities

and 37 Indian reserves received regular subsidies under The Public Transportation and Highway Improvement Act. In addition, 35 municipalities received subsidies under the Traffic Signal Program. The breakdown was as follows:

Roads and Bridge Section	Kilometers of Road	Approved Expenditure	Subsidy Paid
Metro Toronto	722.3	\$ 36,202,242	\$ 18,100,000
Regions	6,849.0	91,806,334	51,324,201
Counties	12,468.8	71,229,941	46,797,173
Townships (including Indian reserves)	75,189.9	176,328,826	98,679,682
Urban Municipalities	32,291.4	247,466,427	116,034,075
	127,521.4	623,033,770	330,935,731
Traffic Signals		4,237,732	2,118,866

In 1978, the office administered a connecting link program involving 130 projects with a provincial contribution of \$15,570,000. The expenditure includes \$1,267,000 for maintenance in towns and villages.

The development road program consisted of 70 projects, involving an expenditure of \$5,900,000. This work is carried out under agreement with the Ministry and subsidy may be up to 100 percent of the expenditure. The road remains under the jurisdiction of the municipality with the work being done either on a day labour basis or by means of contract.

During 1978, the Ministry spent \$3,032,600 to provide aid for 218 local roads boards, 23 statute labour boards, 32 Indian reserves and 126 informally organized groups involved with public roads not under Ministry jurisdiction in the unincorporated areas of the province.

A further \$2,033,600 was spent without local participation on the replacement of bridges and on grade improvements involving 121 projects on these roads.

In 1976, MTC initiated a review of all provincial municipal bridges. This project was completed in 1978. The Ministry will be giving priority to supplementary subsidy funding for indicated improvements.

Eight municipalities completed their road needs studies and some 100 municipalities updated their existing studies in 1978 bringing the number to 122 now included in the

municipal road funding program for Lower Tier municipalities. A computer information system and financial models were used to determine the 1979 construction and maintenance allocations.

In September of 1978, the counties

and regions began converting their road needs information to metric measurements and standards. This work includes a complete review of the condition of the road system, traffic usage and cost estimates of recommended improvements.

Transit Office

The Transit Office is responsible for transit program policy development and evaluation, administration of municipal transit financial assistance programs, development and management of operational improvement demonstration projects and for carrying out or assisting in the planning for municipal and provincial transit system improvements.

A total of 62 municipal transit systems received financial assistance in accordance with the operating assistance policy initiated in 1977. This policy provides subsidy to cover 50 percent of the theoretical net cost calculated on the basis of a target revenue/cost ratio established for each municipality. This approach provides an incentive for the municipalities to exceed their target ratios, enabling them to pay proportionally less of their total operating costs.

Municipalities experiencing an above-normal population growth rate and those commissioning major rapid transit facilities could also receive additional assistance.

The total operating subsidy paid in 1978 amounted to \$56.2 million. In

the same year, a \$36.2 million subsidy was paid to municipalities to cover 75 percent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, bus passenger shelters, transit terminals and maintenance facilities. The subsidy for the rapid transit construction program amounted to \$34.9 million. This covered 75 percent of the cost of subway construction in Metro Toronto with major expenditures allocated to the Spadina Rapid Transit and Kennedy-Kipling Extension to the Bloor-Danforth subway.

At a cost of \$11.9 million, 11 operational improvement projects were either in progress or completed during the year.

The following projects and tasks of interest have been started or completed by the office during the year:

- Financial and technical assistance for 28 municipalities for bus, rapid transit and related transit operational projects; assistance to TA-TOA and other agencies was provided to 30 projects;
- Technical and financial assistance was continued for the development of an automated transit communication, monitoring and data collection system; and the development of an automated transit management information system was initiated with the advice of industry. In addition, application studies for automated communications and monitoring systems have been started at Thunder Bay and Hamilton;
- The feasibility of “honour fare” was investigated for its application to transit in Ontario. Showing it could apply under some circumstances, it is proposed for testing at a future date;
- Tender proposals for articulated buses were requested from all known manufacturers and were in the evaluation stage at year-end;
- Funding the development of light rail transit vehicles through the Urban Transit Development Corporation was continued.

Aviation Services Office

This office coordinates and administers the Ministry’s air program activities. Ongoing responsibilities include the development and review of Ministry-related air policies and

standards and the overall program administration. The office also monitors the federal aviation activities and programs which could affect the province.

Although funding of the Remote Airport Program is the responsibility of the Ministry of Northern Affairs, MTC is responsible for implementing and maintaining it. In 1978, improvements were made to 12 remote airports and the construction of airports at Bearskin Lake and Webequie was initiated. Equipment was purchased and delivered to Deer Lake and Sachigo in order to begin construction at their sites in 1979.

The 12 airports constructed in the remote airport system were maintained for year-round operations at a total cost of \$990,000.

Subsidies amounting to \$1,805,000 were paid to 14 municipalities to improve or construct municipal airports. Included in this work was the construction of airports at Ear Falls, Hornepayne, Ignace, Parry Sound, Smiths Falls and Terrace Bay.

Subsidies amounting to \$115,000 were paid to nine municipalities in northern Ontario to assist in the maintenance of municipal airports.

The office monitored the performance of norOntair, administered by the Ontario Northland Transportation Commission; and a study of air services in eastern Ontario was completed.

The office also provided technical support to the Legal Branch during the Canadian Transport Commission hearings affecting Ontario’s air services.

Provincial Roads Planning Office

This office is responsible for developing, analyzing and evaluating that part of the provincial roads program dealing with capital improvements.

The basic framework for preparing the improvement program is transportation systems service. This is measured throughout the roads systems by the application of service standards which are used to identify the deficiencies to be removed. Other components of the capital improvement program plan deal with additions to the existing systems, either in response to specific Ministry transportation objectives or to provincial government objectives. This year brought continued refinement in the application of the program planning methodology.

It is also responsible for program planning support systems such as the recently developed Linear Highway

Reference System, and the various data sets.

Special studies of non-routine transportation problems associated with the provincial roads program continued to be undertaken – i.e., the disposition of the motor vessel “Pelee Islander”.

There was the continued development of policies to protect the integrity of provincial road corridors with special emphasis on coordinating the policy developments of various Ministry offices dealing with matters relating to corridor control.

Environmental Office

The Environmental Office is responsible for the development and coordination of natural and cultural environmental policy, guidelines and procedures relative to all Ministry programs. Liaison is maintained with all Ministry offices and agencies.

During the past fiscal year, four environmental assessment-class documents and a guideline on construction practices were submitted to the Minister of the Environment. Our office was assisted by members of the Environmental Coordinating Committee representing other offices involved in the provincial roads program.

In addition, staff continued monitoring the cost effectiveness of environmental measures in design and construction and gave lectures on environmental sensitivity awareness and training to operations staff.

During 1978/79, with respect to The Environmental Assessment Act, 1975, liaison continued with the Toronto Area Transit Operating Authority (TATO), The Ministry of Northern Affairs, the Communications Division and Aviation Services Office, relative to exemption requests, the preparation of environmental assessment-class documents, plus report requirements for their program activities.

The environmental issues of erosion, potential contaminants associated with MTC operations and the disposal of material outside the right-of-way were the subject of extensive staff examination.

Urban and Regional Transportation Planning Office

This office is responsible for ensuring the availability of up-to-date multi-modal transportation planning information, as required for strategic policy decisions, program planning and program delivery activities. Typi-

cal office activities in the past year included:

- Monitoring development trends, transportation impact and provision of travel forecasts for provincial highway and GO Transit planning;
- Provision of technical and financial assistance to Metro Toronto and other municipalities in the preparation of their official plans;
- Coordination of municipal and provincial transportation planning efforts by conducting seminars, workshops, joint-planning studies, and developing common data base and planning techniques;
- Conducting background studies on factors external to the Ministry, such as changes in socio-economic characteristics and energy, impacting on transportation;
- Conducting the joint federal/provincial Southern Ontario Multimodal Passenger Studies;
- Numerous systems planning studies as input to planning for the provincial highway program;
- Provision of planning expertise and analysis in assisting the Ministry of Northern Affairs for program delivery in northern Ontario.

Economic Policy Office

This office, split into three sections, provides the Ministry with economic expertise.

The Modal Studies section completed a review of the first year's results of the Northlander passenger train application.

Continued monitoring and analysis of developments in all transportation modes included new input to the proposed federal ports legislation, participation in pilotage hearings, railway abandonment hearings, and input to small crafts harbours applications. Further involvement with the federal/provincial committee on transportation statistics resulted in recommendations on uniform reporting of statistical series by the provinces as well as basic research into a statistical framework for the country.

Participation in the reviews of the railway costing order and the uniform classification of accounts initiated by the federal government in 1977 was an important activity. Final

reports are expected in 1979, to be followed by hearings. A new railway costing order and a new uniform classification of accounts will be produced at the end of this process.

A truck productivity study was undertaken at the recommendation of the Select Committee on the Highway Transportation of Goods. It will review the operating practices of the Ontario motor carrier industry. Phases I and II, were completed in 1978, included an international goods movement survey, and an international, interprovincial and domestic truck traffic survey.

Through the Inter-urban Transportation Working Committee, a compendium of draft policy statements on all aspects of bus transportation in Ontario was produced. Several strategic issues were identified and work aiming to resolve these issues is underway.

The section also participated with the Ministry of Natural Resources in initiating a study to transport mineral aggregates to marketplaces from distant supply areas. In analyzing the impact of economic regulation on public commercial vehicles, a literature search of the theory and background of regulation was conducted, along with interviews of American authorities. An analysis of the impact of regulation on the trucking industry and on the public in Ontario is also well underway.

The physical distribution consultative program, aimed at assisting small industries, was continued by the transportation pricing and market studies section, with 25 firms receiving full analyses. Total estimated savings were approximately \$230,000. Apart from full studies, many other

firms were supplied with answers to specific inquiries.

The physical distribution newsletter was again sent out in 10 editions to a mailing list of 6,200.

Work continued for the Canadian Conference of Motor Transport Administrators, with the section head assuming the chairman's role in the working group on common documentation. Major accomplishments include final settlement of the carriers' maximum liability clause and commencement of bills of lading for household goods carriers and bus parcel express.

Economic analyses were made of the future of the bus manufacturing industry and the articulated bus pilot proposal.

A study was completed on the effects of major highway construction on industrial locations.

Economic analyses and forecasting activities were undertaken including reviews of economic trends prepared for senior management, inflation indices constructed for the Ministry's programs, and macro-economic impact indicators for MTC's major programs.

Coordinator, External Relations

The Ministry necessarily has a wide range of contacts with the transportation agencies of other governments and the transportation industry in developing and administering transportation policy.

The coordinator's position was established to help ensure such contacts and regular dealings are consistent and appropriately reflect the views of the government with respect to external relations general-



A view of Highway 401 and the Don Valley Parkway

ly. This required fundamental work within the Ministry and regular contact with officials of the Ministry of Intergovernmental Affairs and the transportation agencies of other provincial and federal governments.

Given the current emphasis on cooperation, the reduction of bureaucratic red tape and the clarification of relative roles and responsibilities of the federal and provincial governments in areas of common involvement, this function retains a high priority.

The perception across Canada that transportation is a key element in national economic recovery, influencing as it does every sector of economic enterprise and major regional development programs, lends further importance to the Ministry's efforts to contribute to appropriate national policy-making and administration in transportation.

Research and Development Division

The Research and Development Division is comprised of the Executive Area, Engineering Research and Development and Systems Research and Development Branches and the Resource Management Office.

Executive Area

This group provided control of the division's administrative needs including the budget, manpower planning, the Ontario joint transportation and communications research programs, and the quarterly project progress report.

Engineering Research and Development Branch

This branch conducted research and development to improve the physical attributes of highways—pavement, bridges and other highway structures, materials and quality assurance, and highway wayside equipment.

Staff also investigated load-related problems arising from the regulation of commercial vehicles on the highways; undertook pavement safety and environment-oriented research; conducted cost effectiveness studies to determine the future cost implications of engineering decisions.

Pavement Research and Development

Pavement research engineers developed better design methods for predicting pavement behaviour and performance; improved ways of evaluating load capacity and load-imposed damage; techniques for protecting pavements from environmental effects; and means of predicting and planning more effective rehabilitation and maintenance. Activities undertaken in the last year included:

- A demonstration of weigh-in-motion scale on Highway 401 near Whitby showed a capability of producing records of individual truck characteristics of axle weights and spacings, vehicle speeds and headway groupings, and time-of-day presence of vehicles. This is a cooperative project with several provinces and the portability of the scale system is to be evaluated in Saskatchewan while its use as a presorter for static truck sales is being investigated in Quebec. The system in New Brunswick is being developed to produce useful statistical truck weight and other traffic data;
- Pavement temperature insulation tests carried out jointly with Dow Chemical Ltd. have been concluded. The five-year program of observations was used to derive a design chart which predicts the depth of frost penetration under any given thickness of Styrofoam insulation at locations in the province for which degree days of frost are known or can be predicted;
- A training circuit was developed to improve the consistency of pavement condition ratings (PCR) determined by individual regional raters. The method used to establish benchmark pavement condition ratings for the circuit was by determining the consensus of all regional raters;
- Extending the capability of designing pavements to take advantage of improved materials properties is the subject of a laboratory project,

two phases of which have been completed. The test apparatus and procedures for characterizing asphalt bound materials has been developed and will be introduced on a pilot scale in MTC laboratories. Work on tests and procedures for characterizing unbound granular materials is progressing;

- A manual with guidelines to assist maintenance staff in selecting suitable cost effective treatments is under preparation for review estimating the cost effectiveness of alternate pavement maintenance treatments;
- Potential fuel economies through substitution of wide-base radial truck tires for currently standard dual-bias. ply tires must be balanced against additional pavement damage which might accrue as well as the greater risk of instability. Considerations of relative pavement damage due to wide-base radial tires was accelerated and results confirmed additional accrued pavement damage was not of great significance;
- As part of the Transportation Energy Management Program (TEMP) to reduce Ontario's dependence on imported oil, a study of the opportunities for reduction in petroleum products usage in MTC operations was carried out by consultants under the direction of an advisory group. It identified all major areas and quantified their potentials for conservation enabling MTC to attain conservation goals. Major potentials are in hot mix recycling of asphalt pavements and vehicle fleet fuel optimization initiatives;
- Task Force activities included:
 - (a) Concrete pavement rehabilitation where a survey of the condition of concrete pavements was carried out in two parts: first, those on Highway 401 in the eastern and southwestern regions, then the remainder of concrete pavements elsewhere, except the major freeways in and around Toronto. The division assisted in investigations and economic assessments of various new concrete pavement designs intended to overcome the deficiencies observed in previous concrete pavements;
 - (b) Hot mix recycling, where a study carried out on limited

published reports and visits to experimental projects in Toronto, Quebec and the U.S.A., was found to be technically feasible. However, because of high costs to convert equipment to produce recycled hot mixes, an ongoing program of hot mix recycling was recommended.

Structural Research

The most significant product was the completion of the new Ontario Highway Bridge Design Code, written by a task force of 85 people, many of whom are Ministry employees. The others included academics, consulting engineers, and industry representatives from the federal government, Canada and the U.S.

The task force was subdivided into 17 technical committees, each taking care of one section of the code, each reporting to an 11-member control committee, completely autonomous with regard to technical matters.

The 1500-page code and its commentary took two and one-half years to write. It was based entirely on limit states design and, for that reason alone, it is considered to be the most advanced bridge design specification in existence. It covers hydrological aspects and contains numerous provisions aimed at facilitating inspection and reducing maintenance.

Design live loads, established after several major vehicle surveys, represent the weights and nature of the actual commercial vehicles using the provincial highway systems and are integrated with the permissible weight provisions of The Highway Traffic Act.

It also permits a dramatic reduction in reinforcing steel in concrete bridge decks and is expected to reduce construction costs significantly while improving structural durability as a result of the use of deicing chemicals.

The code also included a new section on the evaluation of existing bridges, reflecting the findings and structural knowledge collected by this office over the past years from extensive bridge testing. It also included an improved method of posting substandard bridges.

This office produced 15 technical papers during the year, accepted either for publication and/or presentation at various structural engineering conferences in Canada and the U.S. At the specialty bridge conference of TRB/AASHTO in St. Louis, Mo., six papers were presented and 11 published in the proceedings.

Staff has also tested 16 bridges, primarily in the northwestern region, the majority of which were wooden. The testing permitted a new understanding of the behaviour of timber structures and provided guidance toward the development of new structural systems.

Materials and Quality Assurance

Research in this office focused on the physical properties, behaviour and in-service performance of construction materials and how to improve their use in pavements and structures by developing better construction and maintenance systems. Activities concentrated on bridge deck durability, improved pavement skid resistance and better quality assurance systems for construction.

Last year's highlights included:

- A new policy requiring the use of non-corrosive epoxy-coated reinforcing steel in bridge decks; such bars are now being manufactured at a new large plant in southern Ontario;
- Strategies were developed for the rehabilitation of concrete bridge decks to select the most suitable repair method, taking into account the condition of the concrete slab and the structure's type, location and importance;
- The acceleration of bridge deck inspection and rehabilitation programs so existing plants are properly maintained with regard to established priorities;
- Further development work on the driving qualities and winter maintenance requirements of new open graded bituminous mixes on freeways in southern Ontario and the use of high-quality slag waste materials from the steel industry; the excellent skid resistance and low noise properties of these mixes has attracted much attention from highway authorities in North America;
- Completion of two large field-demonstration projects to evaluate improved high-skid resistance bituminous mixes for various traffic volumes;
- Implementation of a "black-spot" pilot project to identify, treat and evaluate highway sites with a high incidence of wet pavement accidents.

Earth and Environment Research

This office conducted research into improving knowledge and techniques for the use of earth resources in highway building while minimizing natural or man-made impacts on the highway user or environment from highway construction, maintenance and operation.

Engineers worked last year to develop means of minimizing adverse effects of erosion, scour and silting; improve practices for weather-dependent maintenance and operations; and techniques for measuring environmental impacts, including:

- The continued surveillance of environmental effects of the construction of highway facilities in southern and northern terrains by remote sensing methods;
- A salt study in the town of Ballantrae on Highway 48 to monitor the effect of winter salting operations on the groundwater and local wells affected by salt over the past few years; sampling of well points was carried out during the year to monitor the chloride ion concentration changes;
- The establishment of experimental natural vegetation plots adjacent to highways in various parts of the province by allowing natural regeneration in the highway roadway;
- A sewer inlet capacity study, carried out on the various inlet grates in use by MTC and various larger municipalities, by prototype testing for selected design conditions;
- Snow drifting studies using higher snow fences and a new type of nylon snow fence.

Technology Resources

Technology Resources undertook special projects involving advanced applications of physical, chemical and electrical processes while demonstrating special construction and maintenance techniques.

Projects involved an investigation into the possible uses of waste materials, including sulfur, which results from the desulfurization of petroleum products and natural gas. This product could be used in constructing asphaltic concrete roads, replacing scarce and expensive asphalt cement. If successful, it could permit the use of a lower viscosity asphalt cement, resulting in better

low-temperature crack resistance of our roads.

Cathodic protection of reinforcing steel in concrete bridge decks was also investigated, developed and is now a method for regular field application.

Demonstration projects were set up in an attempt to reduce road salt usage while providing the same level of service.

Highway Wayside Equipment Research

Staff contributed to the Ministry's energy conservation program with improvements in roadway and street lighting.

Partially sponsored by the Ministry of Energy, staff joined forces with Ontario Hydro on a demonstration project on more efficient municipal street lighting including participation in a series of seminars dealing with the energy savings, technology, economics and public acceptability of change-over programs to sodium luminaires.

In this area, the office also developed computer programs for the design and economic evaluation of lighting systems.

Systems Research and Development Branch

This Branch's responsibility was to provide systems research, development and implementation in new areas of transportation technology, improved methods of operation and operational standards.

Transit Systems Research and Development

During the past year, work continued on the development of a transit demand model for planning of transit operations, including a study of the effects of fare and service levels on transit ridership in Ontario municipalities. Operating and scheduling problems in transit services for the handicapped was reviewed and a plan initiated to address the situation.

Paratransit work continued in the implementation of a number of car and van pooling demonstration projects at the Ministry's Downsview office and at several large private employers in the Metro Toronto area.

Mechanical engineering projects



An experimental transit vehicle

continued on railway noise and truck dynamics. Further design and experimental work was conducted for a wheel/rail interaction simulator, work made available to the Urban Transportation Development Corporation (UTDC) for implementation. Experimental studies of rail vehicle noise and of TTC rail vehicle/truck performance were conducted. A set of advanced design resilient steel wheels was tested and modified prior to installation and testing on a TTC streetcar.

Staff continued to work closely with the Ministry's equipment office and regional staff to improve the design and operation of underwater air bubbling systems in the Kingston area to maintain open channels for winter ferry operation.

Infrastructure activities continued on transit vehicle curving dynamics and vehicle interaction.

Electrical research activities included a review of alternative electrical propulsion systems for transit and the updating and monitoring of electric vehicles. An assessment of provincial electrical energy demands for various levels of electrical vehicle use was completed.

Work continued on the assessment of transit maintenance techniques, in particular those with potential for cost reduction.

Staff worked closely with the transit office and Ontario transit properties on planning of the Ministry's articulated bus demonstration project. Together with the human and social factors research section, a study of passenger reaction to and technology of bus destination signs was completed.

Work continued on the assessment

and monitoring of intermediate capacity transit system development being undertaken by UTDC. Expert consultation was also provided in the areas of guideway design, transit vehicle truck performance, wheel/rail noise, propulsion system design and testing, reliability, and guideway and system testing.

Transportation Energy Management Program

TEMP has been a joint program in which the lead roles were played by MTC and the Ministry of Energy. Energy management initiatives within the various offices at MTC and with outside agencies were – and continue to be – coordinated by TEMP. The program addresses the problem of our almost total transportation dependence upon oil at a time when world supplies have become increasingly uncertain with prices rising.

The goal has been to reduce oil dependence in Ontario transportation. Four measures have been identified for realizing this goal:

- Improvement to motor vehicle technology efficiency, including use of fuel-efficient lubricants, tires, and cold weather devices as well as the adoption of more fuel-efficient truck hardware;
- Improvement to the efficiency of transportation systems and operations, including better load factors for passenger and freight transportation, car and van pools, fuel-efficient driving, reduced vehicle speeds and promotion of public acceptance of fuel-efficient autos;

- Reduction of travel involving more widespread use of teleconferencing and the development of implementation plans for urban and inter-city passenger transportation energy conservation;

- Development of oil alternatives including methanol testing, 'state-of-the-art' reviews of hydrogen and electric powered transportation and the feasibility of gaseous fuels in transportation.

Work proceeded in a series of stages involving the identification of promising measures followed by an assessment of their fuel-saving potential, feasibility and public acceptance. Feasible methods were pilot tested. Car pooling, van pooling and audio teleconferencing proceeded to the pilot testing stage while most of the other measures are in various forms of assessment and vehicle testing.

All measures related directly to automotive vehicle energy usage were investigated and developed by the automotive vehicle energy management group within TEMP. After an initial study of impacts and opportunities, the group initiated a number of action programs, all of which are expected to produce demonstrable results in this fiscal year.

A dynamometer facility was almost completed and a fully instrumented test vehicle specified and procured. The latter will considerably improve MTC's road test capability. Fleet testing has also been initiated and U.S. testing procedures have been refined to allow accurate comparative fuel economy measurements.

TEMP activities to date have been closely coordinated to avoid duplicating efforts undertaken elsewhere in government or the private sector. Also, consultation involving the federal government was ongoing in an effort to maximize the impact of Ontario's Transportation Energy Management Program.

Transportation Systems Management and Control

This office's responsibility is to conduct research and development which will improve the operational efficiency and safety of urban network and transit systems through the application of modern automation and computer control technology and the techniques of transportation system analysis. In the past year major achievements included:

- The municipal traffic control systems research study, undertaken to

determine the feasibility of utilizing computerized traffic control in mid-sized and smaller Ontario municipalities, was completed and the results published. This project is coordinating the procurement of computerized traffic control systems for the city of Brantford and the regional municipalities of Kitchener/Waterloo and Durham (Oshawa);

- Systems engineering and software development were provided for the expansion of the QEW Freeway surveillance and control system to new interchanges under construction at Cawthra Rd., Winston Churchill Blvd. and Ford Dr.;

- Cooperative studies were undertaken with the participation of representatives from Mississauga, Oakville and the regional municipalities of Peel and Halton to determine the likely effect on the QEW ramp metering control system of the new interchanges and completion of Highway 403 to Highway 401;

- A comprehensive traffic systems management study of the 401-Toronto bypass was undertaken with the participation of professional staff from the Ontario Provincial Police and the Metro Toronto traffic control centre;

- The adoption of the Type 170 microprocessor-based traffic signal controller for all Ministry applications was completed. In addition, liaison was established with the Ontario Ministry of Industry and Tourism and the federal Department of Trade and Commerce regarding the potential manufacture of such controllers in Ontario;

- Research continued in the development of traffic-flow simulation models which are proving to be extremely important in carrying out freeway and freeway-corridor studies;

- A review was carried out of the UTDC Intermediate Capacity Transit System Computerized Command and Control System.

Driver and Vehicle Research

This office combines the human and social research and the commercial vehicles operations and safety and it conducts research in transportation safety and supports other Ministry offices with professional

expertise in the human and social sciences.

During the past year, the main thrust was directed toward the improvement of drivers' performance and safety. Specifically, the following research efforts were carried out:

- Measurements of 1978 seat belt usage rates;

- Measurements of drivers' attitudes to the use of seat belts and the reduction of speed limits;

- Development of a seat belt film, educational material and a regional conference;

- Development of a three-part film on impaired driving;

- Completion of an analysis on the beginner driver and the initiation of an evaluation of the driver educational program in the school from kindergarten to Grade 13;

- Initiation of a review of the drivers' licence test;

- Continuing evaluation of the North York and Scarborough traffic tribunals.

Research thrust was also directed toward the safety of commercial vehicles, including:

- Completion of the evaluation of self-steering axles;

- Completion of a significant portion of the evaluation of wide base radial tires, air lift axles, jackknife control and truck driver simulation.

Special support was provided in the following:

Energy management:

- Completion of the development of an energy demand model sensitivity analysis;

- Completion of a report on the potential for fuel saving through energy-efficient driving;

- Completion of a report on the promotion of energy conservation;

Highway noise barriers:

- Completion of a survey on the social effects and responses to the installation of noise barriers on Highway 401 in Metro Toronto and on the Queensway in Ottawa;

Program evaluation:

- Completion of an evaluation of the flex-hour program in MTC;
- Completion of a demand study for the proposed introduction of teleconferencing in MTC;
- Completion of the evaluation of transit bus destination signs;
- Completion of the survey on the acceptance of ramp traffic metering on the QEW in Mississauga.

Acoustics Research

This office studied transportation noise, undertook research and provided advice.

Highway noise barrier candidate sites across Ontario were ranked on a benefit/cost basis and barriers designed for those sites chosen for construction. The performance of noise barriers built was evaluated and research continued into new barrier configurations and materials which offer more performance at lower cost.

The noise from pavement-tire interaction was studied and comparative data from various pavement types supplied to pavement designers.

Resource Management Office

Formed in the past fiscal year as a result of the division's reorganization, this office formulates, advises on and implements the policies and strategies for financial and human resource utilization within the division. It also coordinates the implementation of findings; manages an

effective technology transfer to and from the division; interprets Ministry strategic policy and guidelines for application by the division; and develops value engineering concepts and systems for the Ministry's use.

The management and assessment section provides an overall monitoring and assessment of resource management for the division; develops, recommends and maintains a long-range plan for research and development programs and subprograms; evaluates programs and projects with respect to their effectiveness and advises on overall division priorities; administers various Ministry management, accounting and assessment processes for the division such as multi-year planning, management-by-results, etc.; and acting as liaison with the Ministry's Resources Planning Committee and other financial management functions for policy applications.

Research and development systems for resource planning, prioritization, monitoring and review were implemented this past year.

The technology transfer section is responsible for information dissemination to target audiences within MTC, industry, the general public and other provincial, national and international governments and institutions; directing the printing, publication and distribution of technical reports, papers, research abstracts, implementation packages and audiovisual presentations. Emphasis was placed on a/v media and special information packages geared to the specific needs of target user groups in an attempt to ensure speedy and effective implementation.

Major accomplishments included

the establishment of a word-processing centre; the editing, typesetting, drafting and publication of the Ontario Highway Bridge Design Code (two volumes, 1500 pages); and a script outline for "Dice in a Box", an award-winning film on seat belts.

The value engineering section supported the Ministry's financial analyses, priority programming and policy planning functions as well as other R&D programs.

Priority analysis of rehabilitation strategies (PARS) was aimed at developing priority and financial planning methods for rehabilitation and maintenance of Ontario's highway system. Studies included developing up-to-date societal and personal costs of motor vehicle accident injuries; producing vehicle operating costs to reflect present vehicular models; developing measures of highway service; upgrading the highway capacity manual to reflect Ontario conditions; establishing measures of effectiveness; studying the effectiveness of recycling old highway pavements; and implementing the OPAC pavement design system.

The implementation coordination and evaluation section evaluated and assessed the benefits versus the resource inputs for results achieved. In the past year, this function was in the process of being organized.

The strategic planning interpretation section interpreted the Ministry's strategic plan and guidelines by providing appropriate direction and initiative to various research and development programs and subprograms; then ensured the various research and development processes were consistent with the Ministry's strategic planning process.

Operations

Regional and District Operations

Responsibility for field operations of various Ministry programs has been decentralized to five regional and 18 district offices within the regions.

Regional offices are located in Toronto, London, Kingston, North Bay and Thunder Bay, providing for the following program delivery activities:

- Highway maintenance, design and construction
- Airport construction and maintenance
- Administration of municipal road subsidy
- Driver examination and vehicle inspection
- Enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act and The Motor Vehicle Transport Act (Canada).

Northern Region

Construction

Major construction projects included additional work on the Vernon Lake Narrows structure as well as reconstruction activities on several sections on Highway 11. Work was also completed on Highways 124, 60, 117 and 35.

Maintenance

Summer maintenance was conducted on 5,522 kilometres of King's, secondary and tertiary highway. During the winter months, salt usage increased 29 percent on these roads over the previous year due to particularly bad weather conditions.

Municipal

The northern regional office administered varied road assistance programs for 137 organized municipalities,

18 Indian reserves, 99 local roads boards and 14 statute labour boards. Programs included subsidies, development roads, and connecting links in organized areas as well as special allotments in unincorporated areas.

Engineering and Right-of-Way

This office completed 26 sets of contract plans and documents with related property acquisition and granular source lists which represented a program value of \$55,153,000 of which 65 percent was done in-house and 35 percent by consultants.

Staff also continued to carry out pre-contract engineering work to support the five-year construction program. Work consisted mainly of engineering surveys, legal surveys, plans preparation, geotechnical and structural investigations, property acquisition and contract plan preparation.

Drivers and Vehicles

Over 32,000 pre-examination and 18,077 road tests were conducted for driver's licence applicants.

Eleven vehicle inspectors inspected 4,033 heavy commercial motor vehicles; a total of 4,023 cars and light trucks were inspected at our portable inspection lanes; 96,519 commercial motor vehicles and buses were inspected and, as a result, 2,524 reports of suspect violations were processed.

Staff conducted a total of 2,801 driver improvement counselling interviews.

Northwestern Region

Construction

Construction work was carried out on sections of Highways 17, 71, 599 and the Thunder Bay Expressway.

Maintenance

In addition to routine summer and winter maintenance, capital maintenance projects included highway alignment, bridge and culvert repairs, and prime and surface treatment paving.

Municipal

During the year, 70 municipalities and 10 Indian reserves received regular subsidies amounting to \$11,590,772. Office staff undertook 10 connecting link projects at a cost of \$1,901,018 and provided a further \$109,962 towards maintenance of links within towns and villages. Five development road projects totalling \$156,794 were also completed. And some \$1,187,640 was provided to 107 local roads boards, 13 statute labour boards, 73 Indian reserves and informally organized groups involved with public roads not under MTC's jurisdiction.

Engineering and Right-of-Way

Here, staff carried out pre-contract work on a total of 470 kilometres of road way. A major project completed was the preliminary design work on sections of Highway 17 near Kenora, Thunder Bay and Sault Ste. Marie.

Drivers and Vehicles

Staff carried out approximately 19,410 pre-examinations and 14,124 road tests.

A total of 2,455 commercial motor vehicle inspections were conducted, resulting in 45 charges being laid; staff members inspected 3,746 cars and light trucks and 907 school buses. Highway carrier inspectors performed 45,668 inspections, resulting in 1,326 charges being laid.

Remote Airport Program

Construction continued on the Webequie airport; and equipment was transported to Deer Lake, Sachigo Lake and Ogoki for construction scheduled to begin during the summer.

Central Region

Construction

Highway 410 and the primary phase of Highway 404 were officially opened in 1978. And construction or reconstruction activities were carried out on various sections of Highway 401 and on Highway 3, 403, 53, 99, 5, 11, 28, 115 and the Queen Elizabeth Way.



Typical winter maintenance operations

Maintenance

In addition to regular summer and winter maintenance, 15 new signals were installed and 23 existing signals revised.

Municipal

Regular subsidies were provided to 115 municipalities and six Indian reserves, totalling \$135,206,314 in expenditures. Fifty-one connecting link projects received \$4,146,229 in assistance from the province and two development road projects were assisted, involving an expenditure of \$138,371.

Engineering and Right-of-Way

A total of 62 projects were prepared for contract advertising. In addition, preliminary design work continued on the Queen Elizabeth Way and proposed sections of Highways 403, 407 and 89.

Drivers and Vehicles

Staff conducted 277,449 pre-test examinations and 227,208 road tests for driver's licence applicants. Almost 20,000 driver counselling interviews were conducted with drivers who had attained nine demerit points.

A total of 19,845 heavy commercial vehicles were inspected by MTC staff and over 4,000 vehicles removed from service or tagged unfit. Some 56,650 cars and light trucks were inspected of which 3,451 were found seriously defective. And approximately 5,165 school purposes vehicles were also inspected.

Southwestern Region

Construction

A 34-kilometre section of Highway 402 was opened in 1978 and work continued on other sections of the road. Construction or reconstruction was carried out on Highways 40, 2, 12, 400, the St. Thomas Expressway, the Kincardine bypass and E.C. Row Expressway in Windsor.

Maintenance

Landscaping, bilingual signage, and new and revised traffic signals were part of the regular maintenance program. Heavy winter snowfalls were responsible for an increase in the amount of salt and sand used for deicing region highways.

Municipal

A total of \$91,621,439 in subsidies was paid to counties, townships and municipalities in the region. In addition, staff undertook 76 connecting-link projects at a cost of \$5,621,000 and 11 development road projects with expenditures of \$1,065,000.

Drivers and Vehicles

Staff conducted 121,399 pre-examinations and 92,273 road tests for driver's licence applicants. Four review officers undertook 12,773 demerit point interviews and conducted 953 hearings.

During the year, vehicle inspectors checked 3,400 school buses, 7,488 commercial motor vehicles and 2,550 motor vehicle inspection stations. Over 12,725 vehicles were inspected and 2,564 of them found defective. Highway carrier staff inspected 417,560 commercial vehicles which resulted in 5,877 court convictions.

Eastern Region

Construction

Various construction projects were undertaken on Highways 2, 43, 32, 29, 7, 417, 17, 41, 60 and the Thousand Islands Parkway.

Maintenance

In addition to regular summer and winter maintenance, over 8,000 trees and shrubs were planted; nine traffic signals and 13 illumination installations carried out; freeway signs were erected on Highway 417; and bilingual signs were erected at recommended locations.

Municipal

Municipal subsidies totalling \$65,565,360 were granted to regions, counties, townships, urban municipalities and Indian reserves. Twenty connecting link projects received \$1,919,000 and 49 development road projects received \$3,425,667 in assistance.

Engineering and Right-of-Way

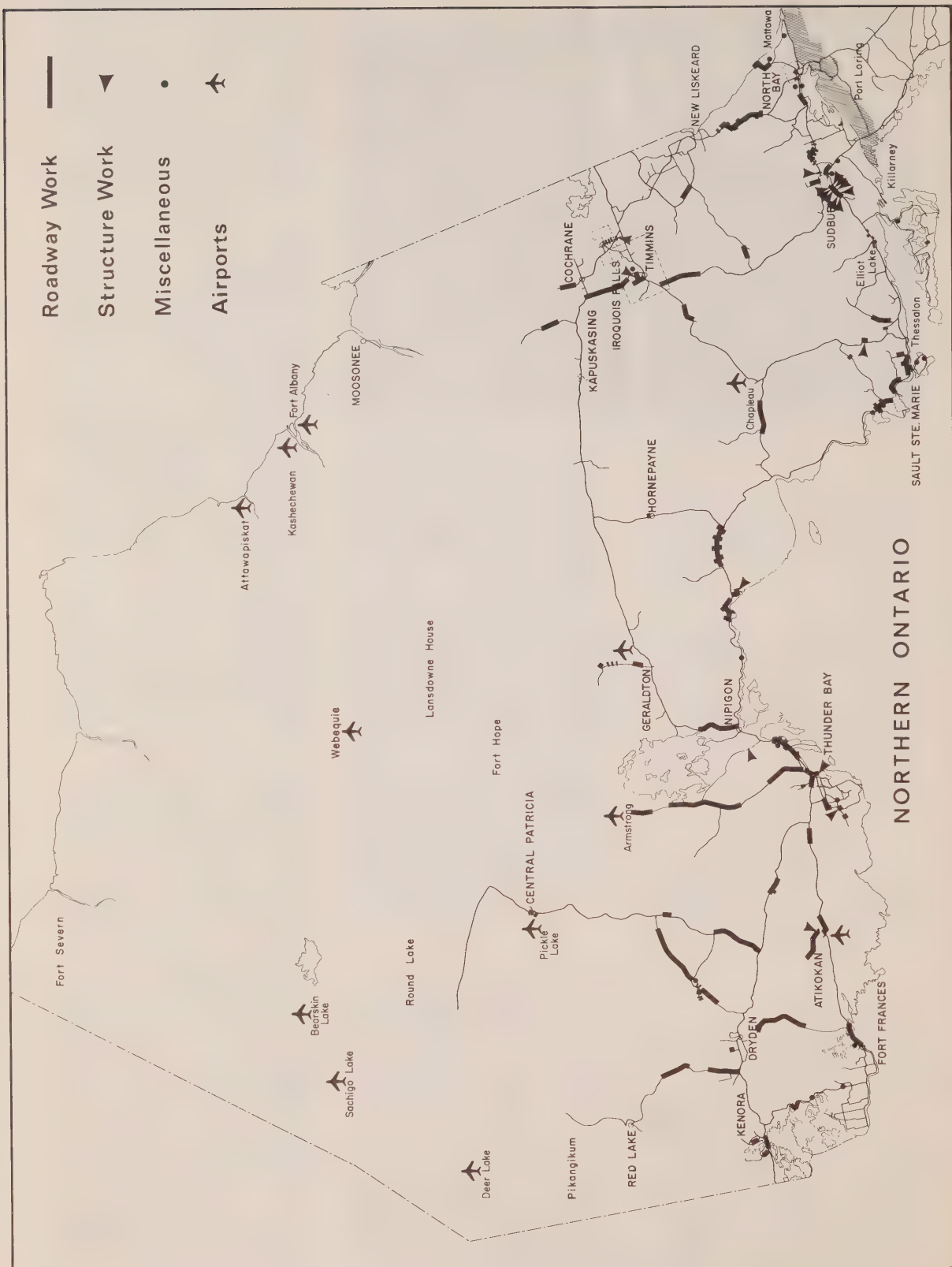
Contract drawings and documents were prepared for 31 construction projects. Of this, 32 percent was done by consultants and the remaining 68 percent completed in-house.

Major design projects include the Pembroke/Petawawa bypass, the Arnprior by-pass and the widening of Highway 17.

Drivers and Vehicles

Approximately 88,861 pre-examinations and 55,020 road tests were conducted by staff for driver's licence applicants. And driver improvement counsellors interviewed 5,096 drivers who had attained nine demerit points.

Inspections of 5,132 vehicles were undertaken at road-side or truck terminals. And 7,221 vehicles were inspected by the portable inspection lane of which 1,235 had serious defects. And 3,285 school bus inspections were carried out while highway carrier inspectors checked 210,416 vehicles.





SOUTHERN ONTARIO

Highway Engineering Division

This division was responsible for the development of highway engineering and survey policies, procedures, and standards in the fields of design, construction, maintenance, traffic engineering, engineering materials, structures and surveys.

Staff was also responsible for providing a design service for structures, structure foundations, electrical installations and major landscape work.

Consisting of the Design and Construction Branch, the Maintenance Branch, the Engineering Materials Office, the Structural Office and the Surveys and Plans Office, the division reports to the ADM, Operations.

Design and Construction Branch

This branch, consisting of the Highway Design, Specifications and Standards, Contract Preparation and Control, and Contract Management Offices, was responsible for the development and improvement of policies, procedures, specifications and standards relating to the design and construction of highways and related facilities.

Highway Design Office

In the detail design section of this office, a Ministry policy was introduced for the noise barrier program. Several new designs were developed and monitoring of barrier performance continues.

Continued emphasis was placed on economic and improved design applications and practices for erosion control measures.

The preliminary design section introduced major revisions to speed change and storage lane standards. Development of design specifications, production and quality control of metric design aids was coordinated on behalf of the Roads and Transportation Association of Canada (RTAC).

Performance evaluation studies of partial width paved shoulders and fully paved shoulders were carried out.

The hydraulic design portion of the Ontario Highway Bridge Design Code was completed by the hydrol-

ogy section and the code is now available to designers. The section also completed its principal contribution to the proposed RTAC drainage manual.

Review of MTC drainage policies progressed within the drainage development section. A draft report on the sewer inlet study was completed by the Canadian Centre for Inland Waters on behalf of MTC.

The highway lighting design manual and traffic signal manual were completed by the electrical design and development section. Work progressed on the metric conversion of electrical standards, specifications, etc.

Design standards for traffic signals were developed and design standards for remote airport lighting were established.

Electrical design drawings and documents for electrical installation on about 290 projects were completed, with approximately 77 percent handled by engineering consultants.

Specifications and Standards Office

This office provided up-to-date specifications and highway engineering standards with related policies and procedures for the design, construction, maintenance and safety of highways as well as a monitoring function for regional developed special provisions and special design standards.

Staff continued to participate with the Municipal Engineers Association in the development of uniform Ontario provincial standard drawings and specifications.

The specifications staff issued 64 new or revised construction, supplemental and material specifications. Eight supplemental specifications were cancelled.

The conversion of all specifications to metric units was on target with the issue in February of all construction specifications in metric terms and those material specifications where the industry or manufacturers have already converted.

The production of standard special provisions for contract documents continued.

The standards section issued four policy statements, developed or updated 100 highway engineering standards, and modified 200. An additional 146 standards were converted to metric and a metric manual was prepared for printing and distribution.

Contract Management Office

This office was responsible for the

development of new policies and procedures related to the improvement of contract management and manpower management including staff training. It also provided technical recommendations on those matters above the regional authority. In the last year, this office:

- Developed policies and procedures to place the responsibility for the supply of more highway construction materials on the contractor, in order to reduce Ministry administration costs;
- Introduced smooth-wall blasting techniques into selected projects to improve highway safety and reduce costs;
- Continued its participation in MTC's quality assurance in construction project and implemented recommendations;
- Participated with MNR in discussions to ensure the future granular needs of the northern Ontario construction program are satisfied at minimum cost to the Ministry.

Contract Preparation and Control Office

This office was responsible for the preparation of final documents for tendering Ministry contracts. During the bidding period, it also provided clarification or official interpretation to contractors.

During the past year, this office processed for award 283 contracts.

Maintenance Branch

A program evaluation was initiated to develop preferred options for pavement rehabilitation – specifically, a format for better return from investment of resources in preventive maintenance for asphalt and concrete pavement. In addition, closer attention to pavement drainage systems under concrete pavement showed promise of lowered incidence of slab breakage and deterioration due to traffic.

Roads snowplowed during the winter months totalled 21,476 kilometres. Salt used for deicing roads totalled 400,714 tonnes. Sand used for winter maintenance amounted to 971,083 tonnes, a slight increase over 1977/78.

The winter maintenance research project, reviewing procedures and means to minimize salt use, were continued and a final report is expected in 1980.

Special Maintenance Services

Test applications of more durable types of pavement marking materials were evaluated. Approximately 100,000 feet of hot spray thermoplastic was applied on the asphalt sections of the Highway 401 – Toronto Bypass. Although considerably more costly than traffic paint for the initial application, the superior durability of thermoplastic should eliminate annual or semi-annual painting of this heavily travelled section of highway and may ultimately prove to be more cost efficient. At the same time, approximately 5,000 feet of synthetic pavement marking tape was applied to evaluate its relative effectiveness and durability.

Staff also experimented with various types of raised reflective road markers which will not be damaged by snowplows. A test installation of 74 units of one type was made on a reverse curve situation on Highway 25.

The sign manufacturing operation was also reviewed during the past year. To evaluate the possible merits of privatization, the southwestern region purchased its total annual requirement of several types of standard highway signs from the private sector. The bid prices obtained appeared comparable to MTC's in-house manufacturing costs. Subsequent monitoring of other aspects of this venture such as ultimate field performance of the signs, delivery schedules, packaging etc., will ensure that a realistic cost comparison is made.

Electrical Maintenance

The following is a general summary of electrical projects approved and funded by the capital maintenance program:

- Revision or installation of traffic signals throughout the province;
- Highway illumination projects throughout the province;
- Installation of flashing warning signals throughout the province;

The electrical maintenance staff made a total of 24 visits to the districts to perform a monitoring function of electrical facilities.

In addition, technical expertise on specific problem areas was provided to the districts.

Landscape Planning and Operations

Some 79,464 trees and shrubs were planted throughout 12 districts. Included in landscape development operations was the first phase of planting of Highway 404 immediately

north of Highway 401 which required over 9,000 units of plant material.

Herbicide applications for weed and brush control were carried out over 56,000 acres of right-of-way in all 18 districts.

New construction projects required grass seeding operations over approximately 3,500 acres. Maintenance operations accounted for the removal of 5,700 dead and hazardous trees.

The landscape planning staff was involved with 98 projects in various stages of planning and design.

Sign and Building Permits

Building permits issued by the 18 districts under the policy directions of head office totalled 4,098 at a value of \$402,589,972.

The total number of field advertising permits issued was 7,098 at a value of \$80,716; 2,439 guide signs were issued generating \$31,551 in fees.

Other permits issued included 1,295 encroachment permits valued at \$9,716; 2,300 entrance permits, 8,865 new or renewed sign permits and 295 point-of-sale sign permits were issued for no applicable fees.

Traffic Engineering Office

This office was responsible for setting policy and procedures applicable to traffic control strategies and devices. A variety of services to other branches were provided in relation to data collection, subsidy approvals, sign designs and the continuing improvement of design standards.

A study of motorist aid systems was carried out by the traffic analysis section resulting in the placing of Citizens' Band radios in two OPP detachments on the Queen Elizabeth Way (QEW) to enable police to respond quickly to emergency situations.

The traffic information systems development section continued in the development of the accident information system as part of a project team. This section also led the investigation into a regional system which is now in the process of development and interim implementation.

The purchase of microprocessor-based traffic controllers was initiated by traffic control devices staff resulting in appreciable savings. There were also active efforts to encourage Canadian manufacture resulting in Canadian firms being successful in a recent tender calling for additional equipment to be supplied in the following fiscal year.

Monitoring of the QEW freeway surveillance and control project in Mississauga was continued by the traffic control development section. Traffic volumes passing through the system were maintained at a very high level. A considerable amount of time was spent on design work which will lead to the expansion of the system to three more interchanges.

The traffic signing section developed and introduced 39 new sign standards and 10 revised sign policies including 12 new symbol signs. The new policy manual was completed and issued, and the first major revision of the manual of uniform traffic control devices was issued and distributed to approximately 1,400 holders. Preparatory work for large-scale revisions of the highway work operations manual neared completion.

The bilingual signing program was expanded with the introduction of approximately 120 new bilingual signs for installation in designated bilingual areas. Also, diagrammatic signs were designed for six locations on the freeway system and a "too fast" symbol sign was developed for installation on Highway 11 at Gravenhurst.

A new tourism signing committee with membership from the Ministry of Industry and Tourism and Tourism Ontario was initiated last year, resulting in revisions to the recreational and/or resort area signs and policy, and the issuing of a new policy with respect to field advertising signs on staged freeways.

Extensive technical contributions were made to approximately 25 new sign research projects initiated and developed by project committees under the sponsorship of RTAC.

Equipment Engineering Office

This office was responsible for the development and monitoring of equipment maintenance and repair policies, and cooperation, financing and maintenance of the head office and central region fleet.

The new equipment section supervised an expenditure of \$7,787,000 for the acquisition of replacement and additional equipment, and processed the acquisition of \$687,000 of equipment for the development of air fields in northern Ontario. Equipment specifications were updated with strong emphasis on fuel economy.

The "Pelee Islander" was turned over to the Ministry by Transport Canada. Arrangements were made with Canadian Shipbuilding and Engineering of Collingwood to re-

place the two main engines and install new marine gears and propellers. At the same time, two of the ramps were extended, a new sewage system installed, and the passenger lounge refurbished.

A new compressor system was installed in Millhaven for the Amherst Island ferry crossing deicing system. Additional air and modifications to both the Amherst Island and Wolfe Island crossings were contributing factors in the successful and uninterrupted service during the 1978/79 winter season.

A variety of special equipment was designed and manufactured by the design and machine shop staff, including experimental crash boxes, anti-roll devices for anti-jackknife experiments. Extensive experimentation in hot paint application was also carried out.

The fleet management section continued – along with Management Improvement Branch – to assist engineering districts to produce feasibility studies for privatization of MTC equipment repairs. Procedures were developed to implement and monitor privatized repair work.

Engineering Materials Office

This office is responsible for the development of effective methods of using various engineering materials in highway construction and maintenance; and for ensuring the quality of such materials as they are incorporated into the various Ministry works.

The pavement design and management section took a leading role in task forces on quality assurance, recycling of asphalt pavement, concrete pavement rehabilitation, geotechnical abbreviations and symbols and MTC soil classification and issued interim or final reports on all subjects.

It also issued final reports on shale-fill construction practices, the use of plastic pavement skirts to eliminate pavement edge cracking, and cold planning and texturing of concrete pavements.

The bituminous unit of the quality assurance staff completed and published a report on the construction and performance of emulsified asphalt cold mix pavement in Ontario.

The soil mechanics personnel carried out foundation investigations at 90 bridge sites across the province. Of these, six were for municipal jurisdictions. Ten projects were handled by geotechnical consultants. Thirty-three foundation investigation reports were produced for contract purposes covering 82 work projects.

Pile load testing was carried out at one site during construction to satisfy designers that the intended load was being achieved on the driven piles.

Structural Office

Staff completed the design and contract documents for 54 bridges in-house and supervised the design of 51 bridges by consulting engineers, totalling 105 major structures for the year. This represented the largest work load in recent years, up from a total of 82 structures the previous year. This increase was largely due to the policy of increasing the shelf supply of completed contract documents, and was achieved by a substantial expansion in consultant assignments. The increased work load caused some problems in meeting the design schedules on some projects early in the year but by rotating office staff and assigning more work to consultants, this situation was corrected.

This year also saw the introduction in Ontario of segmental pre-stressed concrete bridge construction. The first application of the method was in the municipal area on the Islington Avenue bridge in Toronto. The first in-house design of this type of structure was completed for the Highway 406 bridge over 12-Mile Creek.

The use of the alternative design method for tendering large structures was introduced, with designs in both steel and pre-stressed concrete prepared on two major projects – the Vernon Lake Narrows bridge on Highway 11 and the Madawaska River bridge on Highway 17 north. This procedure was subsequently extended with alternative designs started on two other major bridges – the Bay of Quinte bridge at Belleville and the Highway 403 crossing of the Credit River.

In the approvals section, the number of municipal reviews was close to the previous year, with 208 final designs and 265 bylaw approvals. The number of detailed bridge evaluations was up from 11 to 42, indicating the increased emphasis on bridge repair and strengthening rather than replacement. This emphasis also extended to the municipal area with the completion of the municipal bridge appraisals and inventory.

The new Ontario Highway Bridge Design Code was completed and both the code and commentary volumes were published and distributed late in the year. Some 28 engineers from the Structural Office

were involved in the preparation of the code.

Surveys and Plans Office

This office develops policies and procedures for engineering surveys and legal surveys, plan preparation and registration, cartography, photogrammetry and remote sensing.

The first bilingual edition of the official Ontario road map and two maps of the county lithograph map series 1:250,000 were completed. Four one-inch to two-mile county whiteprint maps were completed with the assistance of summer students. A variety of cartographic services were provided to the Ministry and other government agencies on a demand basis. The policy of selling map base films to the general public was developed. Design stages of a new 1:250,000 map series for southern Ontario were also begun.

Aerial survey section staff delivered 140 photogrammetric engineering plans at various scales, and 58 individual model sheets at large scale for the engineering and title record plan process. For non-mapping purposes, 42 vertical aerial photography projects totalling 2,221 line miles were flown, as were nine oblique aerial photography projects.

The remote sensing section continued its study of various environmental parameters for a test site along Highway 402 as part of a project on the surveillance and prediction of remote sensing of the environmental effects of a new highway facility. Progress and results of the investigations into multispectral photography and thermal imagery were presented to two technical societies. The report on pavement distress features investigation was completed. The section also continued to monitor program delivery functions and provide professional consultation services to the regions, head office and others. In addition, the section provided aerial photographic mosaics and image library services to the Ministry and others. Approximately 1,100 m² of mosaics were compiled and 2,350 requests for image library services were processed.

The surveys section evaluated an additional 564 horizontal control survey monuments on the Ontario coordinate system and also established 431 precise benchmarks. During the year, 995 plans were examined by office staff. In addition, 217.13 miles of highway were designated as controlled access, bringing the total mileage of such highways to 3,798.15 miles.

Drivers and Vehicles

Transportation Regulation Division

The Transportation Regulation Division is comprised of the Licensing and Control Branch and the Program Development Branch.

Licensing and Control Branch

The Licensing and Control Branch consists of the Driver Licensing and Control Office and the Vehicle Licensing and Control Office.

Driver Licensing and Control Office

The licensing and post-licensing of drivers came under the jurisdiction of this office. The day-to-day functions also included the maintenance and administration of the demerit point system; the maintenance of all drivers' records; administration of licence suspensions; the reinstatement of driving privileges; and the review of all drivers known to have medical or physical conditions.

1978	
Licensed Drivers	4,725,546
New Drivers	244,256
Male	2,789,883
Female	1,935,663
Demerit Point System	
Warning at 6 to 8 point level	147,332
Interview at 9 to 14 point level	51,914
Suspensions at 15 or more point level	10,246
Suspensions for 30 days	8,864
Suspensions for 6 months	1,382
Suspensions for physical or medical reasons ..	2,087
Suspensions for drinking and driving	42,408

Vehicle Licensing and Control Office

A major responsibility of this office was the registration and licensing of the province's 5.2 million vehicles,

the maintenance of all vehicle registration records and the provision of relevant vehicle registration information for the purpose of law enforcement.

Licensing service was provided to the public throughout Ontario by 11 Ministry offices and 304 appointed licence-issuing agents.

An automated system handled the 3.6 million passenger vehicle and the 0.5 million trailer registrations. Other records were maintained manually for commercial motor vehicles, buses, motorcycles, mopeds and motorized snow vehicles.

The licensing of public commercial vehicles and public vehicle operations was also administered by this office.

Program Development Branch

The Program Development Branch was responsible for providing the primary staff resource to the drivers and vehicles area of the Ministry in the assessment of transportation regulation of programs and in the development of new policies and programs for that area.

The branch is comprised of five offices: The Project Development Office; the Program Planning and Evaluation Office; the Vehicle Standards Office; the Safety Coordination and Development Office; and the Carrier Policy and Reciprocity Office.

Project Development Office

This office was an integral part of the Program Development Branch, reacting to requests and demands for new policies and laws in the area of driver and vehicle administration. This was accomplished through a project assessment and development process, involving an initial screening of policy proposals to determine their validity in relation to government/industry policy guidelines. In addition, the office assessed ideas, recommended priorities, developed thoroughly researched positions and guided feasible proposals through the various steps of approval.

Program Planning and Evaluation Office

The program planning and evaluation office planned and coordinated the development of an effective measurement and assessment process for the various elements of the transportation regulation program. Information obtained through this process was provided to senior management for policy decisions and comprehensive planning of the program.

Staff also performed a financial monitoring and reporting role for each of the cost centres within the program and was extensively involved in the development of the long-range plan.

In addition, the office supplied the appropriate information to the Transportation Regulation Planning Committee, and acted as a focal point in the transportation regulation program for the development and coordination of the strategic planning process. These elements included the program position and prospects paper and the program guidelines.

Vehicle Standards Office

Staff participated in the development of vehicle-related safety standards, legislation and regulations, and provided engineering expertise internally and externally in matters relating to vehicle design, safety standards and government control.

In addition, the office investigated accidents in which vehicle condition may have been a contributory factor and recommended appropriate government action. In some cases, staff attended coroners' inquests as expert witnesses and prepared Ministry responses to jury recommendations.

As an ongoing program, the office managed the equipment approval program covering vehicular devices requiring Ministry approval under The Highway Traffic Act.

Safety Coordination and Development Office

Office staff functioned within the Program Development Branch to ensure continued improvement of the effectiveness and efficiency of Ministry highway safety regulation,

providing liaison services for the Coordinator of Highway Safety.

In addition, personnel participated with other branch offices in the design and implementation of development projects, providing a liaison service between the Transportation Regulation Division and the Research and Development Division as well as with outside development resources.

Carrier Policy and Reciprocity Office

Staff with this office initiated, developed, revised and coordinated major transportation policies affecting the safe, efficient and economic movement of people and freight by the highway carrier industries in Ontario. In so doing, they had to be sensitive to the implications of such policies for both the highway carrier industries and the economy of Ontario.

Specifically, the office coordinated the activities of the Government of Ontario regarding commercial vehicle reciprocity with other North American jurisdictions; conducted and coordinated special studies and negotiations related to government policies and reciprocity arrangements respecting commercial vehicles; defined and participated in related policy and legislative projects conducted by MTC, the Ontario Government and intergovernmental organizations, and provided an information and liaison service on matters relating to government policies on the highway carrier industries.

Regional Operations Division

This division was split into 13 districts contained within five regions: the northwestern (Thunder Bay); southwestern (London); northern (North Bay); eastern (Kingston); and central (Toronto).

Responsibility for field operations throughout Ontario in such areas as driver examination, vehicle inspection and enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act, and The Motor Vehicle Transport Act (Canada), including investigation and prosecution of illegal trucking operations in the province, was administered by this division.

Program Administration Office

Office staff previously reported directly to the Executive Director, Regional Operations Division; early



Motorcyclist awaits examination

in the year, however, a manager was selected to supervise the staff more directly and improve the overall administration of the executive office.

Headed up by an administrator for each of the three field disciplines, staff provided driver examination, vehicle inspection and highway carrier services.

Policies, procedures, and standards were communicated to the field by this office and overall training programs developed and delivered by individual administrators.

Monitoring and gathering of drivers and vehicles statistics to meet the management-by-results system was another responsibility assigned to this office.

The recognized authority program was audited by the driver examination administrator – a program allowing the trucking industry, fleet operators and colleges of applied arts and technology to train and sign for the driving competence of their driver employees or students under the control of the Ministry.

Investigations and Prosecutions Office

Office staff monitored compliance of the highway carrier industry and performance of regional highway carrier activities to ensure standards were met by the carriers, that their overall operating performance met MTC standards and to ensure uniform application of The Public Commercial Vehicles Act and The Motor Vehicle Transport Act (Canada).

Over the past three years, a comprehensive, off-highway enforcement program was developed by conducting in-depth investigation requiring examination of all books,

records and documents. These investigations are now the rule rather than the exception. Numerous investigations have been conducted by this office into the operations of unlicensed carriers providing for-hire service under the guise of a lease arrangement.

Recently there has been increased activity in the examination of licensed carriers' books, records and documents to establish if the operation is in compliance with the terms and conditions of their operating licence. In all, 39 non-compliance reports, together with supporting documentation, were filed with the Ontario Highway Transport Board during the past fiscal year.

As a result of in-depth investigations, some 1,110 cases were placed before the courts for contravention of The Public Commercial Vehicles Act, The Public Vehicles Act and The Motor Vehicle Transport Act (Canada). Approximately one-third involved purported leasing arrangements.

Occupational Health and Safety Office

Responsible for devising policies, programs and safe practices, this office was designed to protect employees from work-related illnesses and injuries, and accidents involving MTC motorized equipment.

A total of 441 employees completed an eight-hour course in defensive driving in 1978/79. And 1,464 equipment operators were awarded Safe Driving Awards in 1978 including 38 who achieved the 20-year milestone award.

First aid certification was obtained by 701 employees in the 1978/79 fiscal year through MTC instructors.

Finance and Administration

Services Division

The Services Division consists of three branches: the Computer Systems Branch, the Supply and Services Branch and the Property Branch.

Computer Systems Branch

The function of this branch has been twofold: to coordinate the Ministry's system activities, funding, and advise Ministry management on systems planning matters; and provide program managers with expertise in automated and related non-automated systems and the acquisition, development and maintenance of automatic data-processing services.

The branch acted as a clearing-house for all computer program development with systems coordinators acting as catalysts by identifying systems opportunities and advising program managers.

Currently there are more than 100 computerized systems supporting various programs of the Ministry.

Systems Planning Support

This office has been responsible for implementing and monitoring efficient systems development methods in the Ministry as well as systems to support research and communications. Last year the SPECTRUM-1 systems development methodology was introduced to conform with government policy. Training courses were attended and five pilot projects undertaken using the methodology.

In the area of communications, a system was implemented to provide engineering/economics support to the independent telephone companies operating in Ontario. Also, the Broadcast/Cable Data Base was further developed to show the extent of radio and television services in various parts of the province.

Energy conservation was facilitated by a highway illumination design system which aided in providing uniform lighting at minimum cost.

Management Information Systems

Staff were responsible for the development and support of systems providing financial, administrative and operational data to Ministry managers and staff. Over the past year, the operations management system, dealing with financial transactions in the districts, regions and head office, was tested and implemented in the Bancroft district and Kingston regional offices as well as in head office. Intelligent terminal installation and staff training have taken place in each of the remaining 16 district and regional offices. By the fall of 1979, all 19 locations will be automatically linked to the central computer data base.

Development of a performance budgeting system for use throughout the Ministry was also undertaken.

Regional Liaison and Production Services

Personnel here were responsible for the provision of comprehensive support to all Ministry users with respect to data conversion, technical control, documentation and administrative support, computer services monitoring and graph plotting services for engineering applications.

A network of 20 intelligent terminals were installed in Ministry regional and district offices as well as the Financial Branch at head office. Maintenance and technical support for this network is administered through this office.

Engineering Systems

Approximately 50 operational systems were maintained and enhanced by this office, such as structure design, road design and transportation planning, which supported the work process in every facet of highway building and transportation planning.

Two major systems were implemented including:

—The traffic accident information system which provided MTC with accurate statistics for public information as well as for highway improvements leading to accident prevention;

—The Ontario structure inventory system which provided engineering data on some 12,000 bridges and culverts in Ontario.

Driver and Vehicle Systems

Responsible for systems support for the Transportation Regulation Division with regard to drivers and vehicles in Ontario, staff installed a new safety inspection program for school and commercial buses during the past year.

By improving the accuracy of the vehicle data base, this office supported law enforcement agencies in the apprehension of drivers for hit-and-run as well as other offences.

Within the drivers system, all operator and chauffeur licences have been converted to a "class" licence. This office also participated in the feasibility study of photo licences for Ontario drivers. A new drivers program was implemented which now has all driving instructors automated, ensuring that only qualified drivers are instructing beginner drivers. An automatic downgrade was introduced for classified drivers who do not file necessary medical certificates.

Supply and Services Branch

This branch is responsible for the development and monitoring of Ministry supply and services policies and procedures as well as the delivery of these services throughout head office, the Ministry of Northern Affairs, the Ministry for some, and the government for the purchase and disposal of motor vehicles. These services are provided through the five offices listed below.

Purchasing and Supply Office

The purchasing section – materials and operating supplies, has been responsible for the purchase of all construction and maintenance materials, and general Ministry supplies. Annual purchases totalled approximately \$50 million.

The purchasing section – vehicles

and equipment, acted in the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government ministries and agencies, purchases totalling approximately \$30 million.

The stores section allows the Ministry to take advantage of savings by bulk purchasing. It also facilitated the Ministry's operational function by having materials available for later use. It also reconditioned and stored Bailey bridge components for emergency use throughout the province. There are currently 220 such installations in the province.

Special Services Office

This office is responsible for the administration of a capital building program involving the Ministry's total major building and space requirements, including office furnishings and equipment at head office and at regional and district headquarters. Staff are also responsible for the provision of accommodation, telecommunications and postal services within the Ministry, and the administration of service centres on controlled access highways.

In the past year, working drawings were prepared and construction began in a regional laboratory building in Kingston.

A site plan was developed for a proposed regional complex and driver examination facility in Mississauga.

Working drawings were prepared and a contract awarded for the construction of associated buildings for the Geraldton district airport.

A major accommodation alteration program to consolidate all MTC head office administration functions at the Downsview complex and the establishment of a consolidated regional complex in the western section of the region was initiated.

Major telecommunications projects completed in the past year included the installation of a multi-channel VHF/UHF radio system for North Bay district and the design for a similar radio system for Kenora district.

With regard to the Ministry's northern airstrip program, non-directional radio beacons were installed at Round Lake, Geraldton and Terrace Bay; also meteorological equipment was installed at the latter two locations. The radio beacon at Fort Hope was relocated to a nearby site to accommodate the federal Transport Canada zoning bylaw.

Extensive studies were continued

on the subjects of audio and video teleconferencing and, towards the end of the year, an audio teleconferencing system was completed to serve head office at Downsview and all regional office locations.

In the field of telephone communications, two pilot systems were approved for eastern and southwestern regions, addressing the problems involved in providing a "single window" toll free, province-wide public access to the Ministry.

Experimentation continued on the possible use of Facsimile to replace the present teletype system; and a pilot system permitting a study of applications was approved and installed between Kingston regional office and head office in Downsview.

Special services operations section's responsibilities included incoming and outgoing mail handling, courier mail service to all regional and district offices and Downsview Teletype Centre activities.

The distribution centre and cancel plateroom at Queen's Park are important responsibilities of this section, including the handling of heavy volume of licence plates, permits, drivers' licences and returned licence plates.

Volumes of mail items reached:

Outgoing Mail	2,147,238
Incoming Mail	4,704,888
Teletype Messages	163,627
Orders Processed	64,665
Plate Cancellations	198,518

Twenty-three service centres were in operation at the end of the year, 19 on the Macdonald-Cartier Freeway and four on Highway 400. Revenue derived from the locations exceeded \$3,600,000. Facilities and services available at service centres on a 24-hour basis included restaurants, washrooms (including handicapped facilities), public telephones, first aid, automotive fuels and lubricants, and emergency towing and repair services.

In addition, 21 picnic rest areas were in operation at the service centres.

Graphic Services Office

The principle function of the Graphic Services Office is to provide printing and duplicating services; a wide variety of high quality black and white and colour reproduction services using photographic, diazo, screen processing and xerox methods; a commercial art and display service for the various Ministry programs; and administration of

the MTC identification card issuing program.

Approximately 24,000,000 impressions were produced in the offset reproduction facility; 22,700 requests for reprographic services processed; 500 requests for commercial art designs completed; and the display unit participated in eight exhibitions at various locations throughout Ontario.

General Services Office

The government garage continues to be responsible for the maintenance of government-owned sedans operated by cabinet members and senior management at Queen's Park as well as providing a limousine and chauffeur pool service.

The field review and disposal office facilitated the disposal of all used Ministry equipment, surplus material and all Ontario Government motor vehicles, by means of public auction or tender. Sales totalled \$2,500,000 last year. Field visits ensured compliance with Ministry policies and procedures for purchasing and stores.

The tenders office promoted and maintained strict security over all tendering procedures, tenders in custody and all confidential matters relating to engineering and supply contracts.

Approximately 11,000 tenders were received and processed for 2,000 various contracts. Slightly more than 2,200 contractors and suppliers attended tender openings.

In the advertising function, staff placed approximately 3,000 insertions on behalf of the Ministry on a province-wide basis. These advertisements called tenders on engineering and supply contracts, property sales, equipment sales, etc.

The direct cash sales of contract documents, the standard specification manual and the Ministry's contract bulletin to the contracting industry produced an annual revenue of approximately \$52,000.

The instrument repair shop repaired and tested Ministry-owned survey equipment, traffic counters and allied equipment.

The accounting and asset control section was responsible for the monitoring and administrative control of the Ministry's movable asset inventory control program. Approximately 100,000 items were controlled in this program.

The planning office coordinated and provided an analytical and cost planning function for the entire branch.

Record Services Office

This office administered a program providing assistance to all Ministry organizations in the efficient handling of records and information. Centralized storage, microfilming of records and standard filing systems were – and continue to be – effective control methods. Forms design and control activities were also a centralized service.

The library services office provided library services for the Ministry, acquired all publication and reports and operated a central library which is recognized as an authoritative source in the transportation field.

The administrative support section provided office administration, typing and typesetting services for manuals and publications for a number of ministry organizations.

Control records for sale and distribution of publications and maps were also maintained. Sales are made through this office and regional and district offices throughout the province. Revenue from all sources amounted to over \$30,000.

Property Branch

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title searching and conveyancing functions have been developed by this office.

Using such policies and procedures, staff in five regional offices negotiated 1,340 amicable property settlements. The Ministry expropriated 269 properties to obtain title for land required to permit contracts to proceed.

MTC also paid out \$17,637,879 in compensation in acquiring title to lands required for highway projects; an additional \$1,293,020 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$9,113,230 from the sale of surplus lands and \$601,332 from leasing properties was received by the Ministry.

MTC's formal training program was revised and now consists of courses involving appraisals and negotiations to which both this Ministry and MGS participate. In all, 28 staff members attended the advanced appraisal course and 42 attended the principles of right-of-way acquisition courses # 101, # 201 and # 202.

Internal Audit Branch

Responsible for the Ministry's audit activities, this branch has also been appointed auditors of record for the Ministry of Northern Affairs. Under the general direction of the Deputy Minister, the branch is segregated into the following three areas of responsibility to accommodate this function.

Operational Audit Office

This group was engaged in the expenditure, revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units as well as some 300 private licence-issuing agents throughout the province.

Staff also performed audits in municipalities, dealing with Ministry-subsidized road and transit expenditures, a function extended to cover such agencies as the Toronto Area Transit Operating Authority (TATOA) and the Ontario Highway Transport Board (OHTB) as well as specific programs concerning expressways and connecting links.

During the fiscal year, certain audit procedures were carried out on behalf of MNA and its agency, the Ontario Northland Transportation Commission and its subsidiaries, the Owen Sound Transportation Company Limited and Star Transfer Limited.

Engineering Audit Office

The Engineering Audit Office, with complement in five regional offices

and head office, audited all phases of the Ministry's capital construction program and Ministry-subsidized contracts.

In 1978/79, some 610 interim and 530 final audits were carried out to ensure proper progress and final payments on contracts. During the construction year, 1,000 weigh audits were completed on capital and subsidized contracts.

Claim audits were performed on 50 contracts and 300 special assignments were completed. Audits of 15 design projects and 50 negotiation reviews rounded out this office's activities.

Project and EDP Audit Office

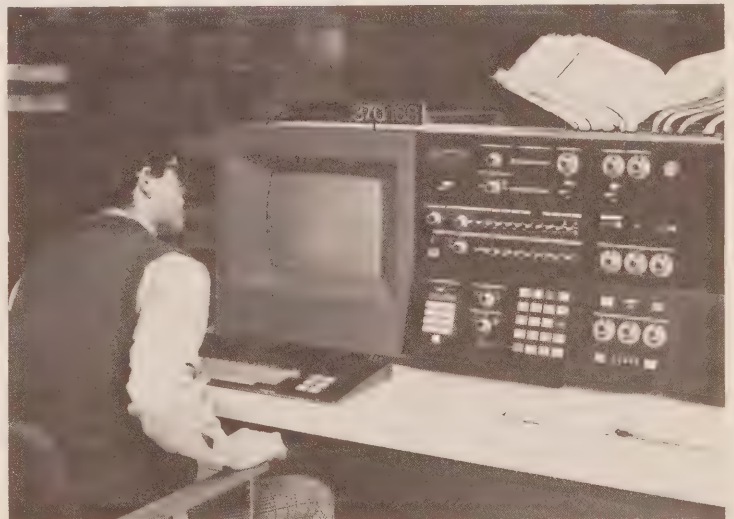
Staff here performed specialized audits which included records of private enterprise and Crown corporations on items of a complex or contentious nature. Miscellaneous investigations were undertaken as directed.

Force account payments, claims and negotiations audits were performed involving records of contractors, as requested by the Engineering Claims Office, the Design and Construction Branch and regional construction offices.

Audits of Ministry electronic data processing operations were conducted to evaluate and determine effectiveness and efficiency of the systems.

Office of Legal Services

This office is a law office within the Ministry, providing legal services to the Minister and MTC staff. The legal officers are members of the Ministry



Part of MTC's computer facility

of the Attorney General's staff seconded to MTC and located at head office and in each of the regions.

Staff provided legal advice on all aspects of the Ministry's programs and prepared the legal documentation through which such programs were carried out. The office advised on legislation affecting the Ministry and prepared and recommended amendments to the statutes the Ministry administered.

Legal office counsel provided Ministry representation before the many administrative boards and tribunals with which the Ministry came into contact and conducted prosecutions for offences under the Ministry's statutes.

Insurance and Claims Office

Insurance and Claims staff are charged with the responsibility of dealing with a very large volume of claims filed by the public against the Ministry.

The handling of such claims entailed obtaining detailed reports from regional and district offices, from the police where applicable and field investigations where necessary.

With regard to accidents involving provincial government vehicles, the Insurance and Claims Office handled these matters not only for this Ministry but also for the entire Ontario Government with the exception of the Ontario Provincial Police.

Staff instituted claims against the public for damage to Crown property such as bridges, light standards, guide rails, etc., and where necessary, arranged for legal action to be taken against responsible parties through

the Ministry of the Attorney General.

Files handled by this office and services provided numbered 20,678, covering claims of all types.

Financial Management Services

Financial Management Services provided senior and line managers with the technical tools and information to improve the financial management process. The group consists of three sections: financial analysis and assessment office, forecasting office and budgetary review office.

The financial analysis and assessment office provided assistance to all Ministry personnel in carrying out appropriate financial analysis on a wide range of projects delivered through three basic activities:

- Acted as a study or project participant, providing financial assistance as required;
- Acted as a consultant to study and project groups involved in performing financial analysis;
- Provided educational material to personnel on making effective use of financial analysis methods.

This office has now completed two years of operation and has reached its interim objective of conducting an educational program designed to make senior and middle managers aware of financial analysis and its potential uses. It has participated in over 100 studies as requested by managers.

The role of the forecasting office was two-fold. First, it provided the

financial forecasting services required to formulate the Ministry's multi-year and annual plans necessary for the fulfillment of MTC's internal strategic and operational planning. Secondly, through the formulation of a multi-year plan, it fulfilled the requirements of both the directives of Management Board and the Government's long term objectives.

In 1978/79, a five-year planning process was adopted based on the results of the Strategic Planning Guidelines. The resulting plan was endorsed by the Minister and the Cabinet Committee on Resources Development.

The plan was also used to develop expenditure targets during the allocation of estimates for the succeeding year's budget.

The budgetary review office addressed the need for performance planning and assessment focused on effective and efficient utilization of Ministry resources. To achieve this, it must develop systems and techniques for meaningful performance assessment and assist line managers in their use. In addition, the office was responsible for carrying out performance assessment on behalf of senior management at the corporate level.

During 1978/79, the use of management-by-results contracts was continued for all activities forming part of the 1979/80 estimates. The office was responsible for the coordination of the MBR process and the necessary reporting to the central agency.

In addition, a study was completed attempting to identify the needs and concerns of line managers regarding the MBR process.

Convictions Registered under The Highway Traffic Act

SECTION	OFFENCES	1977	1978
6	Fail to register a vehicle	4,758	4,044
7 (1)	False statement	63	123
7 (2)	Fail to notify new address	2,997	3,019
8	Fail to have number plates	20,982	20,703
9	Violations as to number plates	5,623	6,628
10	Improper use of number plates	1,195	1,493
13	Fail to have operator's licence	14,182	17,212
14	Fail to produce operator's licence	17,420	25,006
16	Fail to have chauffeur's licence	95	25
17	Fail to produce chauffeur's licence	670	126
18	Operation of motor vehicle by person under 16	197	179
27 (2)	Unlawful possession of permit	36	36
27 (3)	Unlawful possession of licence	237	207
30 (b)	Driving while licence is suspended HTA	601	241
35	No garage licence	11	19
36	Record of wrecked vehicle violation	48	62
37	Improper lights	11,650	13,004
39	Defective brakes	1,640	1,713
41	Faulty equipment (mirror, windshield, etc.)	860	817
47	Driver's view obstructed	210	183
48	Windows obstructed	1,381	1,695
49	Excessive noise/smoke/fumes	26,966	27,731
50	No slow-moving-vehicle sign	53	77
52A (2)	Radar warning device prohibited	0	500
53	Fail to have proper trailer attachments	754	798
55 (2)	Unsafe vehicle	13	25
55 (3)	Failing to submit to vehicle inspection	1,617	2,226
57	Drive unsafe vehicle	4,804	5,516
58	Certificate of mechanical fitness violation	29	21
61	No name of owner on commercial vehicle	1,377	1,679
62	Drive/ride motorcycle no safety helmet	2,309	1,899
63A (2)	Remove/modify inoperative seat belt assembly	1,083	1,525
63A (3)	Failure/improper use seat belt assembly—driver	29,233	84,317
63A (4)	Passenger—failure to ensure seat belt use	4,656	11,164
63A (6)	Driver—failure to ensure passenger seat belt use	427	700
64	Overweight	122	10
65 (6)	Special permit violation	508	810
66 (1)	Overload in excess of permit	1,886	345
66 (2)	Fail to produce commercial ownership permit	1,834	1,151
66 (4)	Spring Regulations—Overload	60	8
68	Overhanging load	2,166	1,254
70	Excessive width or length of vehicle	1,386	295
82	Speeding 30 mph or more over limit	6,869	105
	Speeding more than 19 less than 30 mph	47,308	370
	Speeding more than 10 less than 20 mph	191,074	664
	Speeding under 11 miles per hour	405,047	9,683
	*Speeding 50 km/h or more over the limit	1,461	12,515
	*Speeding more than 29 less than 50 km/h	17,145	88,445
	*Speeding more than 15 less than 30 km/h	58,812	282,021
	*Speeding under 16 km/h per hour	69,408	402,874
83	Careless driving	18,207	18,499
85	Unnecessary slow driving	173	186
86	Fail to obey signal of police officer	363	324
87	Fail to yield right of way	254	202
88	Fail to stop at through highway	55,394	55,162
90	Fail to obey yield sign	847	797
91	Fail to yield—from private road	7,722	7,823
92	Pedestrian crossover violation by driver	6,115	5,853

*Km/h effective September 6, 1977

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1977	1978
93 (1)	Improper right turn at intersection	4,139	4,094
93 (2)	Improper left turn at intersection	5,574	5,707
93 (3)	Improper left turn into intersecting highway	4,846	5,478
93 (4)	Improper left turn from one-way highway	2,163	2,346
93 (5)	Improper left turn into one-way highway	393	565
93 (6)	Improper left turn from one-way highway to one-way highway	889	835
94 (1)	Fail to signal for turn	13,372	14,191
94 (2)	Fail to signal—moving from parked position	3,435	3,567
94 (4A)	Improper manual signal	10	3
94 (5)	Improper directional signal	155	197
94 (6)	Improper use of signaling device	77	69
94 (7) (7B)	Fail to signal	141	164
95	Prohibited U-turns	792	644
96 (5)	Disobey red signal light	48,860	51,838
96 (6)	Disobey an amber signal light	14,712	13,541
96 (7) (8) (9)	Flashing red-amber-green arrow	1,757	1,615
96 (10)	Fail to give right-of-way to pedestrian	1,094	986
96 (11)	Prohibited turn	29,865	32,034
96 (19)	Disobey traffic signal	2	2
97	Drive right side of multi-lane highway	257	296
98 (1) (2)	Fail to share the road	2,821	2,805
98 (3)	Fail to move to right	171	176
98 (4)	Vehicle or horsemen overtaking others	513	460
98 (5)	Horsemen or vehicles overtaking bicycles or tricycles	19	27
98 (6)	Improper passing	14	17
98 (7)	Improper passing	1,570	1,340
99	Drive left of centre of highway	2,127	1,920
100 (1)	Passing to right of vehicle	22	3,722
100 (2)	Unsafe passing to the right	3,404	103
102	Wrong way on a one-way street	7,360	7,278
103 (a)	Unsafe lane change	6,113	6,425
103 (b)	Drive in centre lane of three-lane highway	64	101
103 (c)	Fail to drive in slow moving traffic lane	1,889	2,023
104 (a) (b)	Improper driving on divided highway	1,313	1,254
105 105 (1)	Following too closely	18,276	17,343
105 (2)	Following too close in commercial vehicle	253	233
106 (1)	Fail to yield to fire department vehicle, etc.	328	403
106 (2)	Following a fire department vehicle	18	26
109	Crowding driver	476	509
110	Fail to stop for crossing (signal)	207	210
111	Drive through, under or around railway barrier	193	205
112	Improper opening of vehicle door	516	466
113 (1)	Improper approach or passing a stopped streetcar	176	176
113 (2)	Pass streetcar on left side	57	55
114	Improper driving when approaching horses	0	2
115	Fail to use passing beam	1,398	1,357
116	Improper parking on highway	1,246	1,226
116 (8)	No warning lights on commercial vehicle	42	12
116 (9)	No flares	62	34
116 (10)	Vehicle interfering with traffic	686	995
117	Racing	177	188
119 (b)	Failure to stop school bus or public vehicle at railway crossing	22	6
120 (2)	Fail to stop for school bus	3,453	3,426
120 (3)	School bus: Fail to actuate signals	42	29
120 (5)	School bus: Failure to cover signals and signs	5	8
124	Littering highway	1,435	1,553
125 (2)	Fail to obey a direction sign	3,715	3,612
139	Fail to report an accident	3,394	2,881

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1977	1978
140	Fail to remain at the scene of an accident	2,794	3,089
141	Fail to report damage to highway property	603	664
	Other offences	3,945	13,340
	TOTAL	1,255,790	1,341,980

SUMMARY OF CONVICTIONS

Criminal Code	55,694	57,070
Highway Traffic Act	1,255,790	1,341,980
Regulations HTA	13,633	12,180
Municipal bylaws	32,964	33,334
Motor Vehicles Accident Claims Act	12,465	14,745
Public Commercial Vehicles Act	558	859
TOTAL	1,371,104	1,460,168

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCE	1977	1978
702 (1)	School bus violation	1	350
418 (13) (14) (15)	Number plate violation	619	623
418 (24) (1)	Instruction permit violations	951	608
418 (25) (2)	Drive motorcycle, no endorsed licence	3,435	937
418 (27)	Restricted licence violation	643	327
418 (28)	Fail to notify name/address change	3,738	2,089
418 (29) (1)			
a b c d e	Driver licence violation	253	68
418 (32) (1)	Only single beam headlight	0	142
418 (39)	Seat belt violation	2	3
418 (40) (1) (2) (3)	Motorcycle violation	280	138
421 (4)	Improper parking	134	66
433 (14)	Prohibited use of studded tires	155	230
906 (2)	Classified licence violation	0	935
	Others	3,422	5,664
	TOTAL	13,633	12,180

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

SECTION	OFFENCE	1977	1978
203	Criminal negligence causing death	14	10
204	Criminal negligence causing bodily harm	7	4
233 (1)	Criminal negligence	87	108
233 (2)	Fail to remain	2,092	2,123
233 (4)	Dangerous driving	1,644	1,762
234	Drive ability impaired	23,019	21,659
235 (2)	Fail to take breathalyzer	3,053	3,078
236	Over .08 alcohol	16,088	18,160
238 (3)	Drive while disqualified	9,690	10,166
	Others	0	0
	TOTAL	55,694	57,070

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCE	1977	1978
2 (1)	Drive or permit to drive unregistered vehicle	351	352
2 (2)	Fail to register	0	7
2 (3)	Fail to provide evidence of issue of permit (no plate)	54	73
2 (7)	Fail to display registration number	248	302
2 (8)	Fail to display evidence of permit	328	570
3 (1)	Make false statement	0	3
3 (2)	Fail to notify change of address	0	0
3 (3)	Fail to notify change of ownership	31	29
4	(Plate)—Registration number obstructed	0	0
4 (2) A & B	Use defaced or altered plates	0	0
4 (2) C	Improper plates	0	0
5	Drive on prohibited highway	152	152
6 (2)	Drive in area not designated	5	0
7	Improper crossing of roadway	0	11
7 (1)	Person under age 16 drive on highway	0	3
7 (2)	Permit person under age 16 to drive on highway	19	8
7 (3)	No drivers licence	31	28
7 (5)	Permit unlicensed person to drive	0	4
8 (1)	No operator's licence	196	205
8 (2)	Drive across highway no licence	13	20
11 (1)	Operated (or permit operation) uninsured vehicle	322	323
11 (2)	No insurance	14	7
11 (3)	Fail to produce evidence of insurance	109	147
11 (4)	Produce false evidence of insurance	0	0
12 (1)	Fail to report collision	24	20
12 (2)	Police officer fail to forward report of accident	0	0
13 (1)	Speeding	53	41
13A	Careless driving	53	54
14 (1)	Fail to produce licence	46	45
15 (1)	Improper muffler	2	3
16	Towing on serviced roadway prohibited	6	6
17	No helmet	247	299
22	Trespassing (no written permission)	0	15
24 (3)	Disobey signs on highway or public trail	0	16
	Others	79	63
	TOTAL	2,383	2,806

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

2	Disobey police officer	0	6
3	Fail to yield to vehicle on right	0	4
4	Disobey sign	21	14
5 (1) (b)	Fail to yield—from adjoining property	0	6
5 (2)	Improper crossing of roadway	0	0
6 (3)	Improper left turn	2	3
7 (1)	Fail to signal	3	0
7 (2)	Fail to signal from stopped position	0	0
7 (3)	Improper signal	0	0
7 (4)	Fail to signal stop	0	0
8 (a)	U-Turn—no clear view	0	0
8 (b)	U-Turn—railway crossing	0	0
8 (c)	U-Turn—on hill—no clear view	0	0
9	Disobey traffic signal light	0	0
10 (1)	Fail to share roadway	0	3
10 (2) (b)	Passing when roadway not clear	0	0
11	Drive left of centre	3	0
12	Pass on right—not in safety	0	0

SECTION	OFFENCES	1977	1978
13	Following too closely	1	3
14 (1)	Fail to stop at railway crossing	1	0
14 (2)	Cross railway improperly	0	0
15 (1) (a)	Park on roadway	0	0
16	Speeding	8	0
17	Careless driving	5	1
19 (a)	Drive on King's Highway (prohibited)	0	0
20	Improper lights	0	0
21	Improper or no lights	5	23
	Others	12	3
	TOTAL	61	66

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

233 (2)	Fail to remain	1	0
233 (4)	Dangerous driving	0	0
234	Impaired driving	10	13
235 (2)	Fail to take breathalyzer	0	4
236	Over .08 alcohol	2	6
238 (3)	Drive while disqualified	7	5
	TOTAL	20	28

MUNICIPAL BYLAWS (MOTORIZED SNOW VEHICLES)	17	55
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SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	2,383	2,806
Criminal Code of Canada	20	28
Regulations	61	66
Bylaws	17	55
TOTAL	2,481	2,955

SUSPENSIONS	1977	1978
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COURT ORDERED SUSPENSIONS HTA

Careless driving	780	883
Speeding over 30 mph	170	69
Racing	31	25
Fail to remain	180	212
Drive while licence suspended (HTA Section 30b)	56	29
Others	60	53
TOTAL	1,277	1,271

DEMERIT POINT SYSTEMS SUSPENSIONS

15 demerit point accumulation	7,474	10,246
Fail to attend interview	1,699	1,935
As a result of interview	172	272
TOTAL	9,345	12,453

DISCRETIONARY SUSPENSIONS (HTA—SECTION 27)

Medical or physical condition	1,702	2,087
Operating record	1,937	2,026
TOTAL	3,639	4,113

SUSPENSIONS FOR	1977	1978
Motor Vehicle Accident Claim	5,756	6,194
Failure to pay judgment	1,201	1,270
Default in payment of traffic fine	52,600	50,257
TOTAL	59,557	57,721
MANDATORY SUSPENSIONS HTA		
Criminal Negligence	86	121
Dangerous driving	1,451	1,754
Impaired	20,929	21,430
Fail to provide breath sample	2,728	3,076
Blood/Alcohol .08	14,510	17,839
Fail to remain at scene	1,858	2,101
Drive while disqualified	8,789	10,164
Fail to provide (RDSI)	14	63
TOTAL	50,365	56,548
OVERALL TOTAL	124,183	132,106

DRIVER DEMERIT POINT SYSTEM	1977	1978
6 POINT LEVEL Advisory letters issued	119,632	147,332
9 POINT LEVEL Interviews conducted	39,907	51,914

SUSPENSIONS		
Drivers who reached suspension level through point accumulation	7,474	10,246
Drivers suspended for failure to attend interview	1,699	1,935
Drivers suspended as a result of interview*	172	272
Total suspensions under point system	9,345	12,453

*because of unfavourable records and/or attitudes

LICENCE CANCELLATION		
Licences cancelled due to unsatisfactory driver re-examination at time of point system interview	11	13

DRIVER MEDICAL REVIEW	1977	1978
Total Cases Reviewed	*166,892	*135,289
Satisfactory reports	161,697	121,861
Unsatisfactory reports	1,135	1,489
Waivers under Classified Licensing System	**4,060	**3,194

*Includes medical reports required under new Classified Licensing System implemented in 1977

**medical standards waived during conversion year (O. R. 906) 76 Section 12 (1)

DRIVER OPTOMETRICAL REVIEW HIGHWAY TRAFFIC ACT (SECTION 144)		
Total Cases Reviewed	2,992	3,513
Satisfactory vision reports filed	922	820
Drivers required to wear prescribed lenses while driving—no previous restriction	1,982	2,630
Unsatisfactory vision reports	88	63

DRIVER CONTROL STATISTICS—1978 SUMMARY SHEET

	1976	1977	1978
NUMBER OF LICENSED DRIVERS IN ONTARIO	4,315,925	4,512,327	4,725,546
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,342,938	1,371,104	1,460,168
Motorized Snow Vehicles	2,197	2,481	2,955
TOTAL	1,345,135	1,373,585	1,463,123
TOTAL DRIVER LICENCE SUSPENSIONS APPLIED	116,905	124,183	132,106
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED	10,341	169,884	138,802

SUMMARY OF TRENDS IN MOTOR VEHICLE ACCIDENTS AND IN DEATH AND INJURY RATES OVER THE PERIOD 1969-1978

Between 1969 and the end of 1978, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle accidents (with the exception of the years 1976 and 1978) were all on the rise. During the past ten years, traffic deaths reached a high of 1,959 in 1973 and although the number of deaths increased slightly this year to 1,450, this is the second lowest fatality total since 1962 when 1,383 persons were killed. The population grew from 8.37 million to 8.44 million. The 1978 death rate of 17.2 per 100,000 population and the 1977 death rate of 17.0 per 100,000 population are the lowest since the year 1946 at which time the population was 4.09 million

and the death rate was 16.8.

There was a decrease of 685 persons injured during 1978, from 95,664 to 94,979. The 1978 injury rate per 100,000 population decreased to 1,124.8 from the 1977 rate of 1,142.5 and is the second lowest injury rate since 1971.

This year, the number of motor vehicle accidents reported totalled 183,363, a decrease of 14.7 percent. However, this was due mainly to a change in the accident reporting legislation which raised the property damage criterion from \$200 to \$400 on January 1, 1978. There were increases of 4.1 percent in fatal accidents and 2.1 percent in the number of persons killed while

personal injury accidents and persons injured decreased 1.8 percent and 0.7 percent respectively.

The motor vehicle accident rate per one million kilometres travelled decreased to 2.7 from 3.3 in 1977 but this also is due to the change in the reporting criterion of property damage only accidents. The fatal accident rate and death rate per 100 million kilometres travelled remained the same as in 1977, i.e. 1.8 and 2.1, which are the lowest rates on record since 1955.

The number of kilometres driven in 1978 was estimated at 69,316,667,000, an increase of 4.4 percent over the 1977 figure of 66,400,445,000.

Ministry Expenditure by Highway

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster—Windsor	\$ 8,931,727	\$ 2,862,840
3	Fort Erie—Windsor	5,263,641	1,934,229
4	Port Stanley—(Creemore)	57,342	1,191,630
5	Toronto—Paris	4,289,742	518,157
6	Hwy. 24—Tobermory	2,410,954	1,765,909
7	Ottawa—Sarnia	5,532,086	3,694,287
7A	Hwy. 115—Hwy. 12 (Manchester)	1,252	226,464
7B	Peterborough—Chemung Corners	45,540	47,069
8	Winona—Goderich	1,194,122	579,574
9	Hwy. 11—Kincardine	36,399	860,423
10	Port Credit—Owen Sound	632,927	835,619
11	Toronto—Rainy River	20,610,218	7,248,297
11B	At New Liskeard	36,115	53,683
12	Whitby—Midland (7)	483,790	659,009
14	Bloomfield—Marmora	141,116	222,679
15	Kingston—Carleton Place	1,071,049	432,609
16	Johnstown—Ottawa	227,751	347,438
17	Quebec Bdry.—Manitoba Bdry.	21,732,951	7,008,353
17B	At North Bay	4,761	3,820
18	Leamington—Windsor	214,347	237,103
18A	Kingsville—Hwy. 18	—	20,599
19	Port Burwell—Tralee	87,535	442,907
20	Niagara Falls—Hamilton	17,218	440,785
21	Hwy. 3 (Morpeth)—Owen Sound	2,410,731	1,210,932
22	London—Hwy. 7	—	242,063
23	Hwy. 7—Hwy. 9 Teviotdale	614,146	438,815
24	Hwy. 59—Collingwood	45,951	806,886
24A	Paris—Galt	—	31,588
25	Oakville—Hwy. 89	477,698	508,683
26	Barrie—Owen Sound	138,675	463,917
27	Toronto—Penetanguishene	1,334,572	752,631
28	Port Hope—Bancroft	1,712,987	427,341
29	Brockville—Arnprior (15)	1,361,754	350,758
30	Brighton—Havelock	4,088	153,573
31	Morrisburg—Ottawa	2,327,661	366,509
32	Gananoque—Hwy. 15	583,848	60,672
33	Kingston—Stirling	455	418,540
34	Hwy. 2 (Lancaster)—Hawkesbury	272,884	262,275
35	Hwy. 401 (Newcastle)—Dwight	788,729	616,342
35A	Fenelon Falls—Hwy. 35	247	10,392
36	Burleigh Falls—(Hwy. 7)	2,887,822	255,987
37	Belleville—Hwy. 7 (Actinolite)	1,324	141,348
38	Kingston—Hwy. 7 (N. of Sharbot Lake)	110,455	248,981
40	Blenheim—Sarnia	515,859	572,865
40A	Sarnia By-pass	46,541	—
40B	At Sarnia	—	1,477
41	Napanee—Pembroke	854,989	736,098
42	Brockville—Westport (29)	1,190,560	176,741
43	Alexandria—Perth	2,790,141	572,636
44	Hwy. 17—Hwy. 29 (Almonte)	—	64,638
45	Cobourg—Norwood	—	170,556
46	Hwy. 7 (E. of Manilla)—Bolsover	695	81,336
47	Hwy. 48 (N. of Hwy. 7)—E. of Hwy. 12	662,830	223,617

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
48	Toronto—Hwy. 35 (Coboconk)	\$ 47,619	\$ 593,478
48B	Jct. 12 & 48 to Jct. 48	85	—
49	Picton—Hwy. 401 (W. of Desoronto)	—	75,671
50	Toronto—Hwy. 89	76,934	260,533
51	Rondeau Prov. Park—Jct. Hwy. 3	12	18,131
52	N. of Hwy. 97S—Hwy. 2	12,233	139,657
53	Hamilton—Hwy. 2 (Eastwood)	1,410,511	248,662
54	Cayuga—Cainsville	26,275	268,285
55	Hwy. 401—Niagara	—	82,911
56	Jct. Hwy. 3—Jct. Hwys. 53 & 20	33,481	146,129
58	Port Colborne—St. Catharines	293,549	257,117
59	Long Point—Shakespeare	115,783	462,244
60	Hwy. 17 (W. of Renfrew)—Huntsville	2,182,574	850,626
61	International Bdry.—Thunder Bay	143,971	158,848
62	Hwy. 14 (N. of Belleville)—Pembroke	182,356	830,428
63	North Bay—Quebec Border	1,511,281	249,309
64	Sturgeon Falls—Hwy. 11	67,011	511,218
65	Quebec Border—Matachewan	870,196	390,585
66	Quebec Border—Hwy. 65	62,192	392,250
67	Iroquois Falls—Hwy. 101	—	95,344
68	Hwy. 17 (Espanola)—S. Baymouth	25,100	506,894
69	Hwy. 12 (N. of Brechin)—Capreol	2,304,539	1,186,842
70	Springmount—Hepworth	—	59,832
71	Fort Frances—Hwy. 17 (E. of Kenora)	605,894	413,045
72	Hwy. 17 (Dinorwic)—Sioux Lookout	165,653	154,704
73	Port Bruce—Dorchester	—	142,713
74	Hwy. 3 (New Sarum)—Nilestown	563	85,201
76	Hwy. 3 (Eagle)—Hwy. 2	1,374	71,358
77	Leamington—Hwy. 401 (N. of Comber)	47,723	76,155
78	Hwy. 21 (Dresdan)—Wallaceburg	192	64,948
79	Hwy. 2 (Bothwell)—Hwy. 7	4,288	151,493
80	Hwy. 2 (S. of Glencoe)—Courtright	996	236,317
81	Delaware—Grand Bend	—	264,255
82	Hwy. 7 Jct.—Hwy. 21	—	28,252
83	Hwy. 23 (Russeldale)—Hwy. 21	—	167,916
84	Hensall—St. Joseph	35	70,541
85	Kitchener—Elmira	51,687	103,865
86	Guelph—Amberly	7,347	494,526
87	Harriston—Hwy. 86 (Bluevale)	383	137,190
88	Bradford—Hwy. 27 (Bond Head)	411,517	38,529
89	Hwy. 11—Hwy. 23 (E. of Palmerston)	443,197	487,295
90	Barrie—Angus	97,677	94,406
91	Stayner—Duntroon	—	32,462
92	Elmvale—Wasaga Beach	—	66,979
93	Hwy. 11 (E. of Barrie)—Waverley	4,439	154,398
94	Callander—Hwy. 17 (S. of North Bay)	1,905	33,470
95	Alexandria Point—Wolfe Is.	438,425	38,004
96	Port Metcalf—W. End of Wolfe Is.	203,161	117,012
97	Hwy. 6 (Freelton)—Hickson	—	98,722
99	Dundas—Hwy. 24 (N. of Brantford)	2,158,825	165,121
100	Jct. Hwy. 401 to London	88,973	41,513
101	Quebec Border—Hwy. 17 (Wawa)	1,279,420	1,458,225

KING’S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
102	Thunder Bay—Sistonens Corners	\$ 1,042,763	\$ 86,089
105	Hwy. 17—Red Lake	1,322,923	554,379
106	Hwy. 28 (Dale)—Hwy. 2 (Welcome)	—	13,616
108	Hwy. 17—Hwy. 639 (Quirke Lake)	85,992	162,418
112	Hwy. 11—Hwy. 66 (Swastika)	—	81,139
115	Newcastle—Peterborough	—	179,873
117	Jct. Hwy. 11—Jct. 35	641,392	147,834
118	Hwy. 11—Hwy. 169	186,771	95,687
121	Hwy. 28—Hwy. 35—(S. of Fenelon Falls)	192,897	425,623
123	Hwy. 11—North Bay Airport	—	690
124	Sundridge—Parry Sound	2,602,985	329,214
125	Hwy. 105—Red Lake	—	29,243
126	Hwy. 401—Hwy. 2 (London)	39,102	45,287
127	Maynooth—Hwy. 60 (E. of Whitney)	43	113,311
129	Thessalon—Chapleau	563,432	687,013
130	Port Arthur—Hwy. 61	8,563	39,408
131	Jct. Hwy. 11 & 17 to Memorial Ave.	2,641	—
132	Renfrew—Hwy. 41	1,709	98,576
133	Hwy. 33 (Millhaven)—Hwy. 401	—	33,669
134	Jct. Hwy. 7—Jct. Hwy. 28 (Lakefield)	68,261	48,731
135	Hwy. 401—Hwy. 2 (London)	—	23,376
136	Hwy. 24—Orangeville	1,770	70,965
137	Hwy. 401—Thousand Island Bridge	—	21,333
138	Cornwall—Monkland	27,143	163,224
140	Hwy. 3 (Port Colborne)—Hwy. 20	128,028	88,745
141	Hayes Corners Hwy. 69—Jct. Hwy. 11	9,414	190,441
144	Sudbury—Hwy. 101	940,603	1,055,878
169	Jct. Hwy. 12 to Jct. Hwy. 69	11,342	315,455
400	Toronto—Hwy. 12 (Coldwater)	8,067,387	2,019,440
401	(MCF) Quebec Border—Windsor	21,269,619	10,795,585
402	Hwy. 7—Blue Water	16,463,080	216,833
403	Burlington—Brantford	7,698,187	690,010
404	Toronto—Hwys. 7 & 12	10,564,614	164,074
405	QEW—International Br. (Queenston)	14,085	108,618
406	Hwys. 20—58—QEW	4,224,418	166,549
407	Jct. Hwy. 401 to Jct. Hwys. 35 & 115	189,296	—
409	Belfield Expressway Hwy. 401—International Airport	1,164,952	332,273
410	Hwy. 401—Jct. Hwy. 7 & 10	2,123,259	71,537
416	Jct. Hwy. 2—Johnstown to Ottawa	13,271	—
417	Quebec Boundary—Ottawa	5,394,690	1,089,911
420	QEW—Rainbow Bridge (Niagara Falls)	103,956	64,104
427	QEW—Hwy. 401	4,137,149	644,940
451	(QEW) Toronto—Fort Erie	10,617,408	4,491,495
458	Ottawa Queensway	6,517	273,438
TOTAL KING’S HIGHWAYS		\$209,467,263	\$ 81,505,313

SECONDARY HIGHWAYS

500	Hwy. 41 (Denbigh)—Bancroft	213	266,463
503	Tory Hill—Kirkfield	1,532,382	393,111
504	Hwy. 620—Apsley	52	72,735
505	Hwy. 46—Uphill	—	61,271
506	Plevna—Hwy. 41	99,800	102,596

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
507	Hwy. 18 (Lakefield)—Hwy. 503	\$ 230,653	\$ 186,587
508	Burnstown—Black Donald Mines	—	184,518
509	Hwy. 7—Snow Road Station	85,279	214,575
510	Magnetawan—Hwy. 124	—	10,165
511	Brightside—Hwy. 508	—	166,404
512	Eganville—Hwy. 60	71,105	185,193
513	Hwy. 132—E. of Hyndford	3,082	49,207
514	Hwy. 500—Hwy. 515	3,176	59,469
515	Hwy. 512—Combermere	94,713	164,746
517	Twp. Rd. (near New Carlow)—Hwy. 62	—	46,334
518	Sand Lake—Hwy. 69	141,592	460,304
519	Hwy. 121—Redstone Lake	244,263	202,764
520	Burk's Falls—Ardberg	173,224	197,968
522	Hwy. 11—West of Loring	334,591	454,856
523	Lyell Twp. Line—Hwy. 60	2,990	60,131
524	Hwy. 522—Hwy. 534 (E. of Restoule)	—	19,977
526	Hwy. 69—W. of Britt	614	14,084
527	Jct. Hwys. 11 & 17 Northerly	2,251,589	726,022
528	Wolseley Bay—Hwy. 64	157,900	57,081
528A	Pine Cove Landing—Hwy. 528	—	22,960
529	Hwy. 69—Hwy. 69 (Magnetawan River)	439	130,337
529A	Hwy. 529—Bayfield Wharf	83	18,270
530	Hwy. 519—Hwy. 35 (Carnarvon)	—	93,512
531	Bonfield—Hwy. 17	—	13,654
532	Hwy. 11 (S. of Bracebridge)—Hwy. 69	64,712	46,485
533	Mattawa—Hwy. 63	80,839	192,834
534	Powassan—Restoule	57,434	198,930
535	Hwy. 64—Riviere Veuve	402	283,555
537	Hwy. 69—Hwy. 17 (Wahnapitae)	146,260	142,719
538	Algoma Miners Loop	—	25,023
539	Hwy. 64—Warren	24,187	171,449
539A	Hwy. 539—Tert. Road 805	—	29,467
540	Little Current—Meldrum Bay	49,382	553,550
540A	Hwy. 540—Barrie Island	90	20,011
540B	Manitoulin Island	11,653	3,651
542	Hwy. 68—Gore Bay	197,449	319,707
542A	Hwy. 542—Tehkummah	42	39,447
546	Hwy. 17—Mississagai Prov. Park	111,375	252,470
547	Hwy. 101—Hank Jct.	—	18,104
548	Around St. Joseph Island—Hwy. 17	92,208	271,202
549	Lake Panache—Hwy. 17	13,588	62,043
550	Sault Ste Marie—Gross Cap	79,575	30,046
551	Province Bay—Hwy. 540	40,110	83,362
552	Hwy. 556—Twp. Road (E. of Hwy. 17)	33,268	59,115
552A	Hwy. 552—Hwy. 17	—	4,771
552B	Twp. Fenwick & Vankoughnet	11,433	—
553	Massey—Bull Lake Lodge	634	158,077
554	Hwy. 546—Hwy. 129	209,245	52,220
555	Magog Lake—Hwy. 557	85	39,417
556	Hwy. 17 (Heyden) N. Easterly	67,095	354,134

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
557	Blind River northerly	\$ 77,790	\$ 70,389
558	Haileybury—Montreal River	49	103,703
559	Hwy. 69 Nobel—Hwy. 69	5,520	72,904
560	Hwy. 11—Hwy. 144 (S. of Gogama)	145,601	619,227
560A	Westree—Hwy. 560	—	35,572
561	Bruce Mines—Hwy. 638	461,897	81,371
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	13,904	40,003
563	Batchawana—Hwy. 17	—	16,208
564	Blanche River Bridge—Hwy. 112	—	32,038
565	Pte Aux Pins—Hwy. 550	15,171	4,771
566	Matachewan—Ashley Mine	6,081	90,605
567	E. of Silver Centre—N. Cobalt	—	104,581
568	Hwy. 11—Kenogami	—	10,443
569	Hwy. 11—Hwy. 11 (S. of Englehart)	303,772	155,471
570	Sesekinoko—Hwy. 11	—	10,001
571	Hwy. 562—Earlton	—	10,411
572	Hwy. 11 Ramore—Hwy. 101	—	74,757
573	Charlton—Hwy. 11	—	94,557
574	Cochrane—Norembega	1,668	111,004
575	Jct. Hwy. 17—Jct. Hwy. 64	—	88,332
576	Hwy. 101—Kam-Kotia Mine	—	80,004
577	Hwy. 101—Iroquois Falls	489,400	79,032
578	Iroquois Falls—Hwy. 11	—	28,062
579	Cochrane—Gardiner	52,460	250,264
580	Hwy. 11—Lake Nipigon	50	30,548
581	Hwy. 11—Remi Lake	—	16,946
582	Hwy. 11 & 17—Loop at Hurkett	—	16,700
583	Mead—Lac Ste Therese	91,238	198,712
584	Hard Rock Mine—Nakina	2,567,396	180,885
585	Hwy. 11—Pine Portage	—	88,865
586	Hwy. 11—Lower Shebandowan Lake	—	13,092
587	Silver Islet—Hwy. 11 & 17	68,455	157,541
588	Stanley—Round Lake Road	796,450	145,683
589	Hwys. 11A & 17A—Dog Lake Road	24,774	91,914
590	Hwy. 130—Hwy. 588 (Nolalu)	142,182	73,134
591	Hwy. 589 northerly	28,026	19,439
592	Hwy. 11 (Novar)—Hwy. 11	—	62,040
593	Hwy. 61—Hwy. 588 (Nolalu)	—	134,974
594	Dryden—Hwy. 17	23,164	104,273
595	Hwy. 597—Hwy. 590	450,789	179,346
596	Kenora—N. of Minaki	930	332,133
597	Pardee—Hwy. 608	21,491	55,901
598	Hwy. 604—Hwy. 128 (N. of Kenora)	—	9,447
599	Ignace—Tert. Road 808	4,848,753	878,096
600	Hwy. 71—Rainy River	29,704	254,010
601	Hwy. 17—Dryden	—	54,023
602	Fort Frances—Emo	—	98,811
603	Hwy. 17—Dyment	—	10,158
604	Hwy. 17—Kenora Airport	—	19,250
605	Hwy. 17—Eton—Rugby	5,242	43,628
607	Hwy. 69—(Big Wood)—Hwy. 64	170,100	37,203
607A	French River—Hwy. 607	—	11,652

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
608	Hwy. 61—Hwy. 595 (S. Gillies)	\$ 29,464	\$ 68,822
609	Hwy. 105—Clay Lake	6,116	56,691
610	Hwy. 67—Hwy. 101 (Hoyle)	—	69,281
611	Hwy. 602 (Sherwood) Northerly	6,989	73,422
612	Hwy. 103 (Mactier)—Hwy. 69	—	13,669
613	Hwy. 602—Lake Despair	—	90,343
614	Hwy. 17—Manitouwadge	—	166,379
615	Hwy. 17—Burditt Lake	—	48,848
616	Hwy. 101—Palomar	—	10,001
617	Hwy. 11 (Stratton)—Hwy. 600	42,193	61,027
618	Red Lake—Madsen	—	25,847
619	Hwy. 11 (Pinewood)—Hwy. 621	22,500	405,798
620	Hwy. 62—Hwy. 28 (Apsley)	978,501	140,282
620A	Hwy. 28—Hwy. 620	26	1,371
621	Hwy. 11—Lake of the Woods	75,794	85,016
622	Hwy. 11 (Atikokan) Northerly	285,502	30,152
623	Hwy. 11—Sapawe	—	12,299
624	Hwy. 11—Larder Lake	—	91,198
625	Caramat—Hwy. 11	86,925	118,576
626	Jct. Hwy. 17 to Marathon	—	11,437
627	Heron Bay—Hwy. 17	220	24,800
628	Red Rock—Hwys. 11 & 17	—	17,457
629	Timmins—Timmins Airport	4,366	24,072
630	Kiosk—Hwy. 17	—	118,711
631	Hwy. 17—Hwy. 11	14,148	715,796
632	Hwy. 118—Rosseau	7,648	65,313
633	Hwy. 11—Kawene	—	14,679
634	Smooth Rock Falls—Fraserdale	779,176	256,979
635	Hwy. 17—Ottawa River Bridge	—	9,337
636	Hwy. 11—Frederick House	—	16,447
637	Hwy. 69—Killarney	1,166	335,343
638	Dunns Valley—Echo Bay	7,874	145,453
639	Hwy. 108—Hwy. 546	399	87,549
640	Hwy. 571—Earlton Airport Entrance	—	11,453
641	Hwy. 17—Pellatt	135,092	30,311
642	Hwy. 599—Sioux Lookout	39,839	285,943
643	Hwy. 584—Twp. Road to Cavell	—	48,400
644	Hwy. 69 (Pte Au Baril) Westerly	17	3,806
645	Hwy. 529—Bing Inlet	69	15,227
646	Pickle Crow—Central Patricia	2,066	26,580
647	Hwy. 17—Blue Lake Prov. Park	8,737	44,352
648	Dyno Mine—West Jct. Hwy. 121	375,792	148,708
649	Bobcaygeon—Hwy. 121	—	56,614
650	O.N.R. Right-of-Way—Hwy. 112	—	24,072
651	Hwy. 101—Missanabie	—	167,615
652	Wade Lake—Hwy. 574	303,659	60,488
653	Portage Due Fonte Bridge—Hwy. 17	13,642	54,146
654	Hwy. 11—Nipissing	—	98,737
655	Timmins—Ward Kidd Twp. Bdry.	5,009,934	53,984
656	Hwy. 533 northerly	—	15,130
657	Gold Pines—Hwy. 105	6,116	31,318
659	Hwy. 604—Hwy. 128	—	50,011
660	Bala—Hwy. 103	—	61,688

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
661	Gogama—Hwy. 144	\$ 1,275	\$ 12,036
663	Hwy. 11 (W. of Hearst) N'ly	—	17,479
664	Hudson—Hwy. 72	33,550	38,774
665	Hwy. 17—Richan	263,084	96,638
666	Kenora—Redditt	143,936	67,534
667	Hwy. 129—Sutton	509,702	139,460
TOTAL SECONDARY HIGHWAYS		\$ 26,756,380	\$ 18,702,100

TERTIARY ROADS

801	Hwy. 11—Namewanikan River	—	41,785
802	Hwy. 11—Burchell Lake	—	36,651
803	Hwy. 575—(Hwy. 101—3 mi. South)	—	7,966
804	Hwy. 105 (Lower Manitou Falls)	22,890	92,044
805	Hwy. 539A (River Valley)—Pond Lake	—	78,019
808	Hwy. 646—Otosilwin River	465	184,254
809	Hwy. 564—End of Hwy.	—	7,966
810	Hwy. 553—Richie Falls	727	174,514
811	Tert. Road 800 northwesterly	—	118,410
812	Manitou Road—Hwy. 11 N'ly	3,965,686	55,925
TOTAL TERTIARY ROADS		\$ 3,989,768	\$ 797,534

ACCESS, INDUSTRIAL & ARTERIAL ROADS

708	Marchington Lake Road	2,030,938	—
709	Anaconda Road	—	17,025
730	Mining Access—N. of Central Patricia	839,664	—
751	Arterial Road—Jane St. S'ly to S. Queen's Drive	454,194	—
758	N. of Hwy. 17 to Armstrong/Hurkett	314,230	87,071
773	Garden Lake Road	45,471	—
778	Indust. Rd.—Hwy. 144 West to Sultan	—	39,835
784	Arterial Road—Lawrence Ave. S'ly to Trethewey Drive	1,764,385	—
785	Bending Lake Access Road	104,596	—
788	Moosonee Access Road	4,070	—
792	Hwy. 17—Dubreuilville Townsite	—	121,322
794	Service Roads	9,822	—
795	Sherman Mine Road	—	1,263
799	Caramat—Manitouwadge Road	—	1,522
TOTAL ACCESS, INDUSTRIAL & ARTERIAL ROADS		\$ 5,567,370	\$ 268,038

UNINCORPORATED TOWNSHIPS

2	Indian Reserves	141,889	106,526
7	Special Settlers	13,572	140,444
9	Local Roads Boards	1,773,899	3,657,162
99	Statute Labour Boards	87,005	116,704
TOTAL UNINCORPORATED TOWNSHIPS		\$ 2,016,365	\$ 4,020,836

SPECIAL PROGRAMS

450	Other Ferry Service	—	1,957,177
704	Welland Canal	1,287	—
706	St. Thomas By-pass	381	—

KING'S HIGHWAYS

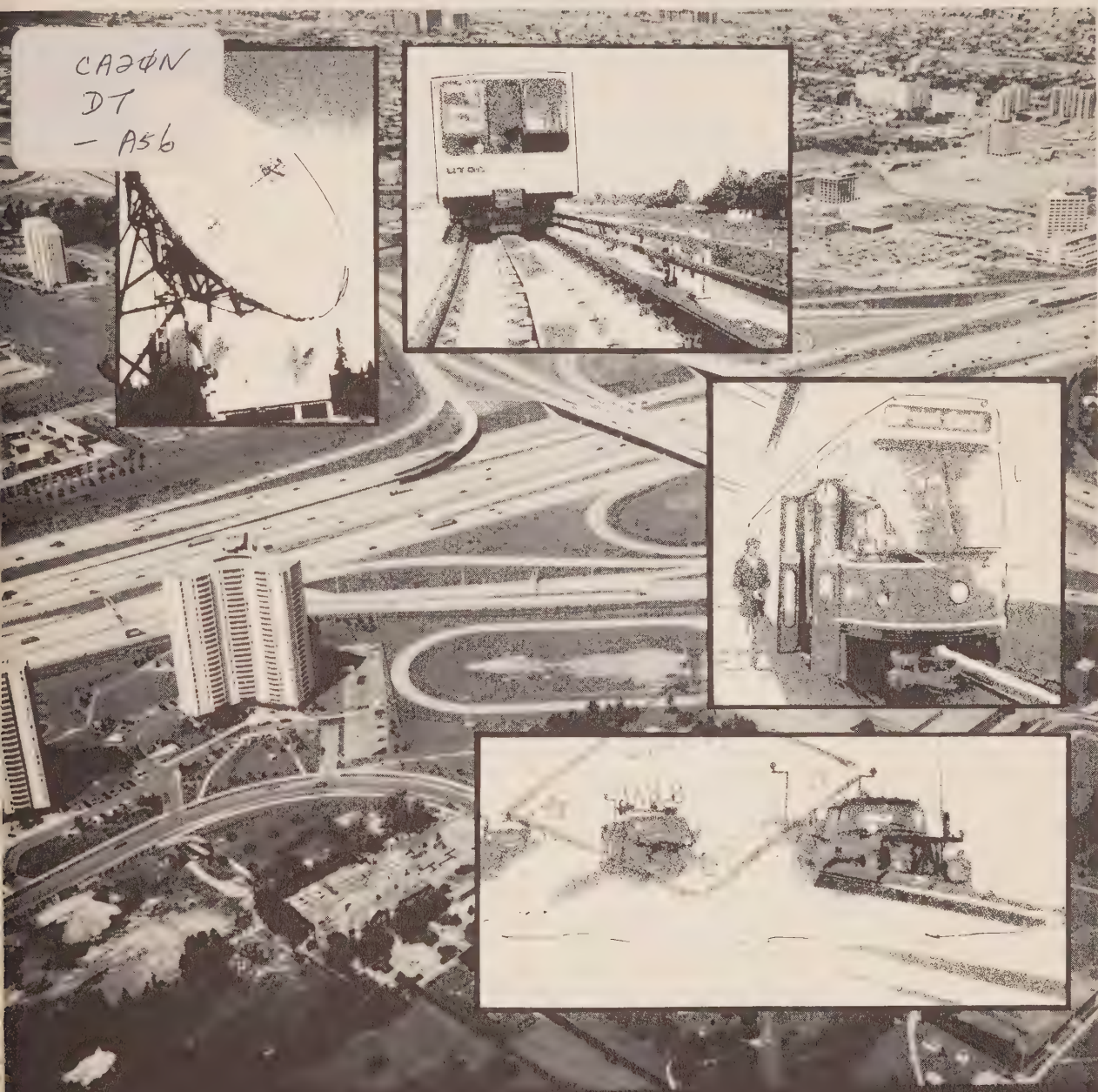
HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
731	Sudbury By-pass	\$ 141,939	\$ 53,538
732	North Bay By-pass	979,924	—
735	Kitchener-Waterloo Expressway	92,094	225,476
762	East Main St. Tunnel	302,053	50,757
765	Townline Road Tunnel	—	24,363
790	Hydro Development Road	13,444	—
797	Airstrip Development	5,597,410	950,767
952	Sidewalks	31,389	—
955	Commuter Rail	245,111	54,917
7087	E.C. Row Expressway	4,644,008	121,645
7118	Brantford Expressway	176,390	15,773
7154	Lakehead Expressway	2,560,372	86
7158	Hamilton E-W Expressway	535,140	—
7163	Twp. of Tisdale	40,103	—
7170	Twp. of Grenfell	—	7,966
8905	Lands & Buildings	1,697,811	189,406
8954	Weigh Scales	1,748,970	—
	Development Roads	5,955,427	—
	Connecting Links	15,596,997	1,135,134
	TOTAL SPECIAL PROGRAMS	\$ 40,359,488	\$ 4,677,171
	HIGHWAY TOTALS	\$288,156,634	\$109,970,992
	Sundry Unallocated, District Office Administration, Engineering, Building, Inventory Charges, etc.	(65,097,646)	17,851,453
	TOTAL EXPENDITURE	223,058,988	127,822,445

ANNUAL REPORT 1979/1980

Government
Publications



Ministry of
Transportation and
Communications



TRANSPORTATION/ ROADS/ CONSTRUCTION/ VEHICLE LICENSING
AIR TRAVEL/ RESEARCH/ DRIVER TESTING/ GO TRANSIT
ENERGY CONSERVATION/ TELECOMMUNICATIONS

Annual Report 1979-1980

**for the
fiscal year
ending
March 31, 1980**



Ontario

**Ministry of
Transportation and
Communications**

To: The Honourable John B. Aird,
O.C., Q.C., L.L.D.
Lieutenant-Governor of the Province of Ontario

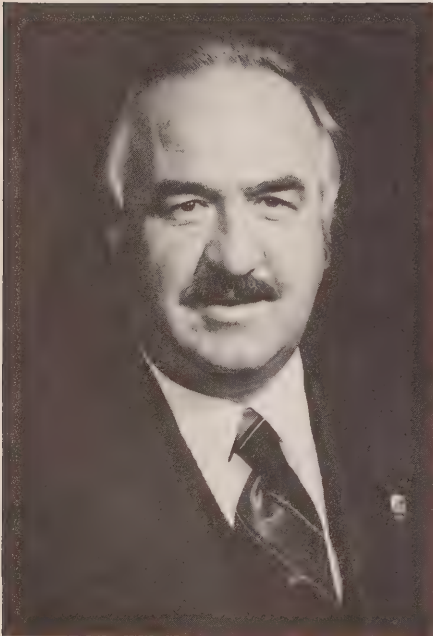
MAY IT PLEASE YOUR HONOUR:

The undersigned takes pleasure in laying before
you the Annual Report for the Ministry of
Transportation and Communications for the fiscal
year ending March 31, 1980.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Jim Snow", with a large, sweeping loop at the end.

James Snow
Minister



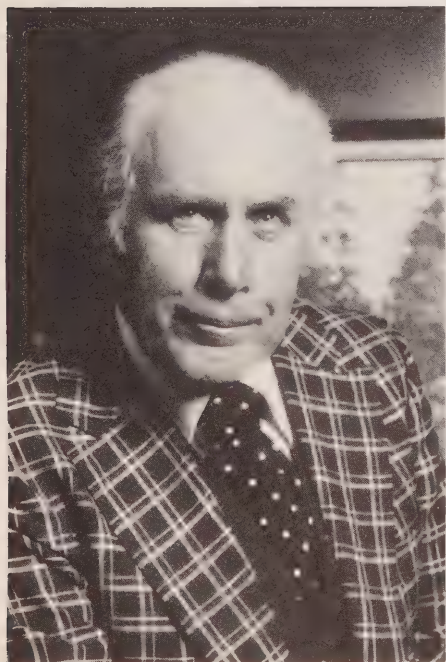
To: The Honourable James Snow
Minister of
Transportation and Communications

Sir:

I have the honour to present the report of the
activities of the Ministry of Transportation and
Communications for the fiscal year ending March
31, 1980.

Respectfully submitted,

Harold Gilbert



Harold Gilbert
Deputy Minister

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Deputy Minister's Summary



Aerial view of Highway 401 at Don Valley Parkway

During the 1979-80 fiscal year, MTC continued its commitment to provide Ontario with high quality transportation and communication services while efficiently administering both human and financial resources.

With that in mind, the Ministry continued to work toward diversification of the transportation system to make it more responsive to the needs of the 1980's.

Ontario Highways

Yet, because highways remain the major transportation mode for the efficient movement of people and goods, some 286.4 million dollars were spent on highway construction throughout the province. And another 388.8 million dollars were provided to assist with municipal road building projects, excluding 145 million dollars spent on the maintenance of Ontario's highway system.

In total, the Ministry constructed and rehabilitated 754.3 kilometres of two-lane highway in southern Ontario and 621.5 kilometres of two-lane highway in northern Ontario, the latter in conjunction with the Ministry of Northern Affairs.

But as fuel costs climbed and energy conservation became of crucial importance, public transit assumed a much higher profile in the over-all transportation picture.

In view of this, MTC continued to provide transit subsidies to Ontario municipalities — 62.1 million dollars in

operating subsidies and 61.8 million in capital subsidies.

As well, the Toronto Area Transit Operating Authority (TATO) worked with several core Ontario municipalities to improve inter-regional transit through a program which assists local authorities to finance transit services operated beyond their regional boundaries.

At the same time MTC, operating in conjunction with involved municipalities, searched for approaches aimed at making public transit more modern and cost efficient. As one solution, we contracted with General Motors of Canada for 53 articulated buses to be used in demonstration projects in Mississauga, Hamilton and Ottawa. Such vehicles should lead to increased ridership while reducing costly manpower overhead.

And MTC is providing a special subsidy for the preliminary engineering of the Hamilton Rapid Transit project — an intermediate capacity transit system linking the city core and Hamilton Mountain.

Saving Energy

Along with more effective public transit, MTC has tackled the energy problem head-on. For example, as a result of implementing energy conservation measures (the gradual switch to more fuel-efficient diesels and smaller vehicles), Ministry fleet operations reduced fuel consumption by some three million litres.

We also joined with the Ministry of Energy to promote conservation via two advisory committees: The TRUCK-

SAVE advisory committee (part of MTC's Transportation Energy Management Program — TEMP) which proposed a voluntary co-operative effort between the trucking industry and government to reduce the amount of road fuel used in Ontario.

The second — the Municipal Transportation Energy Advisory Committee — was established to offer municipalities guidance and technical assistance to help them develop and accelerate their transportation energy conservation programs.

Energy conservation was also promoted when the Ministry completed five commuter parking lots along the 400 and 401 north and west of Toronto. Such lots not only promoted car pooling, but the use of public transit since GO buses now service three of the lots.

Air Services

Air transportation also played a major role in MTC's services, providing a vital transportation link for northern communities. The Municipal Airport Development Program continued to upgrade on-site facilities including a paved runway at Atikokan, the extension of runways at Elliot Lake and Terrace Bay, and upgrading facilities at Hornepayne.

Two task forces examining transportation were set up late in the fiscal year, both aimed at providing Ontario with a greater understanding of the future possibilities of these transportation modes:

Continued on page two



Downsview headquarters, Keele St. and Highway 401

From page one

The Great Lakes/Seaway Task Force will review, assess and propose a provincial perspective for the marine route as it pertains to the movement of goods and people.

The Task Force on Provincial Rail Policy was established to ensure that the government of Ontario can implement a rail transportation plan which will provide for provincial needs.

Trucking Laws

As in other years, MTC worked closely with members of trucking companies and shippers in the formulation of trucking regulation and policy, including changes to the Public Commercial Vehicles Act which offered a uniform bill of lading across Canada.

A new dump truck licence reciprocity agreement was concluded with Quebec, enabling dump trucks to travel freely between the Quebec municipality of Outaouais and Ottawa-Carleton.

As part of the trend toward deregulation, MTC offered lifetime trailer plates for a flat fee of \$25.00.

A new class "W" operator's licence was introduced, permitting the transportation of forest products from the region or regions specified in the licence to any location in the province.

In the interests of highway safety, the Ministry introduced a new traffic light system for the four-lane Thorold

Tunnel under the Welland Canal. It was designed to warn motorists of any traffic problems before entering the tunnel or while inside.

School Buses

A program of bus safety inspections was introduced, covering nearly all bus categories excluding school buses, which were already covered under the school bus inspection program. Buses are now required to undergo two checks annually with a thorough brake inspection once a year.

Amendments to the Highway Traffic Act included new regulations prohibiting the dumping of snow on roadways; requiring the securing of loads on vehicles; defining a bicyclist as a driver;

permitting emergency vehicles to proceed against a red light after coming to a full stop; left turns on a red light from one one-way street to another one-way street, after a vehicle is brought to a full stop; trucks travelling over 60km/h were forbidden to follow any vehicle closer than 60 metres; and commercial vehicles were required to have all appropriate clearance and identification lights on when operating after dark on any road anywhere in the province.

The following is a summary of expenditures reported by the financial comptroller for the fiscal year 1979/80 with comparative figures for the preceding year:

	Fiscal Year Ending	
	March 31, 1979	March 31, 1980
Ministry Administration	\$ 29,687,697	\$ 31,967,912
Planning, Research & Development	30,405,841	23,931,483
Safety and Regulation	35,685,063	42,527,742
Provincial Roads	413,640,331	447,793,360
Provincial Transit	50,855,090	73,517,651
Air	3,423,442	3,645,443
Municipal Roads	364,381,535	388,802,475
Municipal Transit	137,938,207	124,436,080
Communications	2,365,175	1,769,744
TOTAL GROSS EXPENDITURE	\$1,068,382,381	\$1,138,391,890

Deputy Minister's Office

Communications Division

The Communications Division endeavours to ensure provision of adequate, efficient and reliable communications services and development of strong communications ties within and between communities and regions of the province.

During the 1979/80 fiscal year, staff undertook a wide range of activities:

— Provided technical, analytical and accounting support to the Ontario Telephone Service Commission (OTSC) in its regulatory activities, and engineering assistance to Ontario's independent telephone companies;

— Continued negotiations with the federal government to achieve a better balance in the distribution of government responsibilities, particularly regarding provincial regulation of cable distribution systems;

— Tabled Ontario's position on an industrial strategy for the telecommunications sector, including the equipment-manufacturing industry, at the Federal-Provincial Conference of Communications Ministers.

And as an outcome of the conference, staff participated in federal-provincial working groups to study:

- Competition and the future structure of the telecommunications industry;
- Pay TV and satellite distribution of such services;
- Delegation of authority over cable TV; and
- The industrial impacts of communications policies.

Division personnel also tabled Ontario's position on the use of satellites to improve TV service; and Ontario's position on federal telecommunications legislation at the same conference.

As well, staff continued to monitor the ongoing Restrictive Trade Practices Commission hearings into vertical inte-

gration between Bell Canada and Northern Telecom;

— Completed Phase I of Ontario's policy vis-a-vis the independent telephone sector — to be followed by new legislation;

— Continued extensive work, jointly with the Ministry of Northern Affairs to improve existing cable/broadcast services in Northern Ontario;

— Participated with the federal government in direct-to-home broadcasting satellite experiment to assess the potential of satellite to deliver communications services to small and/or remote communities;

— Continued development of a comprehensive cable policy paper and a computerized model for design of a telephone plant for rural communications services;

— Studied transportation/communications substitutability, including Ministry-wide application of audio tele-conferencing techniques;

— Assessed implications of new services and new communications technologies, including fibre optics, broadband switching devices, and interactive cable services;

— Advanced Ontario's position concerning a positive regulatory policy for the broadcast and cable industries together with a new approach to the development of the Canadian program production industry;

— Continued development of a new method of toll settlement between Bell Canada and independent telephone companies;

— Participated with the federal government and telecommunications carrier and manufacturing industries in the terminal interconnection task force; and

— Provided technical design and reconstruction supervision of the independent telephone company facilities destroyed in the Woodstock disaster.

Office of Women's Programs

Office staff, established on a full time basis in 1976, address the Ontario government's commitment to policies on Affirmative Action.

This office continued to develop and implement programs which fulfil its role and mandate. One of the initiatives undertaken was the development of a plan which ensured the accountability of individual MTC managers for Affirmative Action. OWP provided guidance and consultation wherever required to assist managers with this task.

During the 1979/80 fiscal year, personnel activities were highlighted by:

— Participation as a full time member in the middle management staff committee and provincial roads planning committee objective setting task force;

— Chairing the resources planning committee Affirmative Action working group;

— Establishing objectives and strategies for senior management for Affirmative Action;

— Sponsoring the annual Affirmative Action conference for 60 unit representatives and council members;

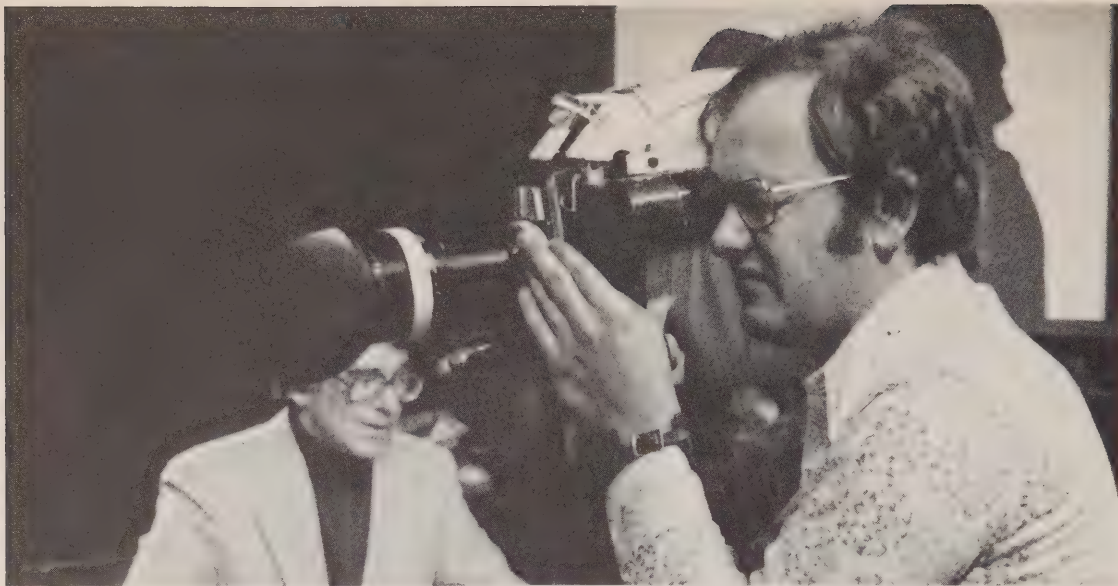
— Participating in on-campus recruitment of civil engineering graduates, engineering, and applied mathematics co-op students, computer sciences co-op students, surveys & plans graduates and civil engineering summer students;

— Arranging open council meetings in four of the regions and one area in head office;

— Monitoring 13 competitions;

— Participating as a full-time member of the regional delivery task force of the government's Affirmative Action Council;

— Assisting Northwestern Region in developing a brochure entitled "Career Path Study".



Shooting a scene for one of MTC's driving films

Management Improvement Branch

Personnel advised and assisted the deputy minister's office on specific management and organization problems. They also provided advice and assistance to Ministry management for the utilization of resources, the most efficient organizational structure and the effectiveness of the products and services provided by the various units.

During the 1979-80 fiscal year, the Branch co-ordinated performance budget implementation, monitored the review of engineering and construction administration project (RECAP), co-ordinated several decentralization and privatization studies and undertook reviews of certain parts of head office organization. Reduction of manpower and substantial monetary savings resulted.

Common reporting codes for performance budgeting were implemented in all pre-contract engineering areas of regional operations. Common coding for regional and district administrative units was developed and partially implemented. The performance budgeting process was extended into the estimating office and the Licensing and Control Branch of the Transportation Regulation Division. It is now estimated that approximately 60 percent of all Ministry staff are reporting time to a performance budgeting system.

A study on the potential for privatizing the MTC's equipment repair was completed and an acceptable formula for determining MTC's internal hourly rate for repairing its own equipment was also developed. Major reductions in the annual total cost of equipment

repairs were identified. Concomitant savings in capital expenditure and future manpower needs were also realized.

Organizational reviews were carried out for many offices within the Highway Engineering Division and Planning Division. The environment office was brought under the Highway Engineering Division. Engineering materials staff was re-organized with substantial savings in salaries and costs. The provincial roads planning office was reviewed and some of its programming functions transferred to the Priority Development Branch.

Decentralization studies of the structural office and the soil mechanics section were completed, with a view to providing capabilities in these specialized disciplines in the regions. Responsibility for program delivery was extended to the regions while retaining head office expertise for direction and policy formulation. The branch also reviewed costs and benefits of some aspects of district organizations and identified substantial savings through improved organization restructuring.

Staff monitored head office and region progress on RECAP. It remains in progress, ensuring identified benefits are realized. A review of central region's district electrical crew make-up was begun and products and services studies designed to fine tune the organization were conducted in the Regional Planning and Design Section, Head Office Design and Construction Branch, Maintenance Branch and Services Branch.

Branch personnel took part in the Results Oriented Management (ROM) study and will continue to be involved in the development of an integrated management framework to ensure the introduction of a results oriented management style in the Ministry.

Strategic Policy Secretariat

The secretariat supported the Minister, Deputy Minister and Strategic Policy Committee (SPC) in the development and implementation of MTC's strategic policy and management of the committee's daily business.

During the past year the secretariat has:

- Managed the business of the SPC, the Ministry's senior executive committee;
- Maintained liaison with the government's central agencies and other ministries on behalf of the policy committee;
- Organized and managed strategic policy development and planning process, specifically the establishment of the format and content of the MTC's strategic plan and publication of the 1981-86 Strategic Planning Guidelines;
- Assisted program and resources planning committees in the continuing task of producing long-range plans to further implementation of the strategic planning process;
- Co-ordinated Ministry response to briefs/submissions received from associations and the public as well as requests for policy-related information from government sources; and
- Provided staff assistance for the Ministry's Results-Oriented Management project (ROM).

Public and Safety Information Branch

Public and Safety Information Branch staff was responsible for the Ministry's internal and external communications programs.

Over six million pieces of safety related information was produced during the year, including brochures, booklets, and periodicals such as the Driver's Handbook, the Ontario Traffic Safety Bulletin, MTC News, and safety curriculum for all Ontario separate and public schools.

In the past year, staff answered over 160,000 telephone requests for up-to-date road information; responded to over 60,000 requests for general infor-

mation; and replied by mail to about 1,500 letters, also requesting information.

Personnel also produced in-house radio commercials as well as other audio-visual materials; developed display advertising for newspapers and magazines.

Production of informational films by audio-visual staff continued with the near-completion of a trilogy of safety films "Three for the Road" designed for high school driver education courses.

The audio-visual unit produced 42,000 black-and-white photographs,

17,000 slides and carried out production of 10 film strips written for the training of MTC support staff.

Sixty-eight speeches and statements for the Minister and Deputy Minister were researched and written. Production of news releases — both general and contract awards — totalled 334.

Other branch responsibilities included the updating and operation of the "Safety Caravan" for fall fairs, winter carnivals and similar events; organizing official functions and opening ceremonies; planning and staffing the MTC display each year at the Canadian National Exhibition.

ROM Report

ROM report — Results Oriented Management — recommendations were tabled at the Spring 1980 senior management conference.

Commissioned a year earlier, ROM's mandate was to define MTC's desirable management process and assess the framework and information-support systems.

The initial volume — A Basis for Results-Oriented Management — was mainly descriptive, including chapters outlining the management framework, integrated strategic policy development and planning, plus concepts for control.

The second — Towards Results-Oriented Management — was the "prescription" segment. It addressed the gaps identified in Volume I, described the processes, and detailed specific recommendations and implemen-

tation plans for the following: pursuing strategic policy development, planning process, strategies for program assessment, perspective on roles, an assessment of management support systems and improvement for resources management.

It also included specific recommendations relative to individual support systems such as MBR, GS&R, MYF and performance budgeting, along with an overall implementation plan.

In all, the report contained 144 recommendations.

Although ROM's primary focus was directed at the corporate and program levels, it was also designed as an educational document for all managers to assist them in their understanding of how MTC should be managed.

It also presented some tactical recommendations which, if adopted, would permit the Ministry's management to meet the challenges of a new decade.

John Barr, ADM, Finance and Administration, was assigned the task of conducting a detailed review of the report to expedite its implementation.

Priority Development Branch

This branch was responsible for the development and management of the Ministry's current, long-range capital construction programs, and ensuring maximum effectiveness of the legislated funds to be expended. Long-range programs for proposed transportation systems were developed by a priority methodology which analysed and recommended viable programs within financial and planning period limits.

The advance program consisted of 2,736 projects at the end of the fiscal year. Of these, 377 were added during the year. Approximately 991 groups of projects had active pre-engineering schedules while 110 contracts were awarded. An additional three were advertised, but not awarded and, subsequently, deferred.



Highway 401 at rush hour

Planning, Research & Development

Planning and Development Division

This division was responsible for the program development, planning and evaluation services required for the management of the Ministry's transportation programs and the provincial interest in those transportation programs provided by the federal government, i.e., rail and marine. It was also responsible for the provincial management of the municipal road, municipal transit and air services programs.

Municipal/Provincial Transportation Branch

This branch is primarily responsible for administering the funding of the Ministry's municipal roads, municipal transit and municipal air programs including the following sub-programs:

Municipal Roads:

- Upper tier roads (construction and maintenance);
- Lower tier roads (construction and maintenance);
- Connecting links (construction and maintenance);
- Development roads (construction only);
- Unincorporated townships (construction and maintenance).

Municipal Transit:

- Transit capital (surface, rapid and demonstration projects);
- Transit operating assistance
- Transit for the physically disabled (capital and operating assistance).

Municipal Airports

- Capital construction
- Maintenance

The remote airport program in territories without municipal organization is also administered by the branch.

Program planning, policy development, and program evaluation activities for these programs and for provincial air services (including norOntair), and provincial transit (operated by TATO) were also carried out.

Other responsibilities included the development of administrative/procedural policies related to the control of highway corridors in the provincial roads system; liaison with the Ministry of Housing on land-use matters affecting provincial and municipal transportation systems; developing and maintaining data information systems for the provincial roads program.

Activities are carried out by staff of four branch offices from municipal roads, provincial roads, planning services, transit and the aviation services.

Municipal Roads Office

This office was responsible for program planning, policy development and evaluation, as well as overall program administration for all municipal road subsidy programs.

Municipal Programs

During the 1979/80 fiscal year, road grants were provided to 819 municipalities and 39 Indian reserves under the Public Transportation and Highway Improvement Act. In addition, 45 municipalities received subsidy under the traffic signal program.

Distribution of road funds are shown below:

The Highway Connecting Link Program:

It concluded 130 projects involving Ministry expenditures of \$16,012,000, including \$1,220,300 for maintenance activities in towns and villages.

Development Road Program:

Work is carried out under agreement with the Ministry and subsidy may be up to 100 percent of the total cost. The road remained under the jurisdiction of the municipality with the work done either on a day labour basis or by contract. Ministry expenditures of \$5,450,300 involved 61 projects.

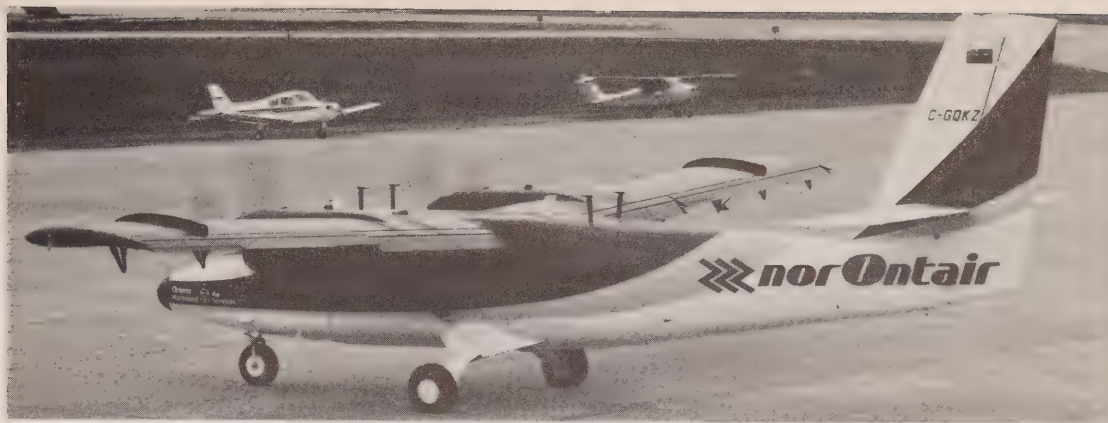
For maintenance in unincorporated areas, the Ministry contributed \$3,023,800 for 223 local roads boards; 21 statute labour boards; 29 Indian Reserves; and 151 other groups.

A further sum of \$2,403,700 was

spent, without local participation, on road and bridge improvements, involving 89 projects.

The 125 municipalities in the large lower tier funding program began converting their road needs information to metric in September, 1979. This work included a complete review of the condition of the road systems and cost estimates for recommended improvements. This update is expected to be completed by September, 1980. In addition, the program was expanded to include Ingersoll, Tillsonburg and Orangeville and the Township of Innisfil.

Roads and Bridges Section	Kilometres of road	Approved Expenditure	Subsidy Paid
Metro Toronto	723.9	\$ 36,649,754	\$18,324,877
Regions	6,839.2	106,852,836	59,833,786
Counties	12,537.9	70,805,518	46,699,905
Townships (Including Indian reserves)	74,673.5	170,130,909	97,403,691
Urban Municipalities	33,093.5	274,336,848	131,634,720
Traffic Signals		5,898,817	2,901,494
Total	127,868.0	664,674,682	356,798,473



The Norontair network serves northern Ontario communities

Transit Office

Personnel were responsible for transit program policy development and evaluation; administration of municipal transit financial assistance programs; development and management of operational improvement and demonstration projects; and carrying out planning for municipal and provincial transit system improvements.

A total of 63 municipal transit systems received financial assistance in accordance with the operating assistance policy initiated in 1977, a policy providing subsidy to cover 50 percent of the theoretical net cost calculated on the basis of a target revenue/cost ratio established for each municipality, plus 25 percent of the shortfall against target. This approach provided an incentive for the municipalities to maximize performance in order to pay a lesser share of the total operating costs.

Municipalities which experienced an above normal population growth rate could also receive additional assistance. In addition, municipalities planning a major facility were eligible to receive a special subsidy for its initial years of operation.

Total operating subsidy paid in 1979 amounted to \$60.8 million. As well, a \$37.2 million subsidy was paid to municipalities to cover 75 percent of the cost of purchasing or constructing specific transit capital assets such as new urban transit coaches, streetcars (CLRV), bus passenger shelters, transit terminals and maintenance facilities.

The subsidy for the rapid transit construction program amounted to \$18.2 million, covering 75 percent of the cost of the subway construction in Metro Toronto with major expenditures allocated to the completion of the Spadina rapid transit line, con-

struction of the Kennedy-Kipling extension to the Bloor-Danforth subway, and Ottawa-Carleton busway engineering expenses.

At a cost of \$11.0 million, six operational improvement projects were either in progress or completed during the year.

The following projects were started or completed by the office:

- Financial and technical assistance to 25 municipalities for bus, rapid transit and related transit operational projects. Assistance to the Toronto Area Transit Operating Authority (TATO) and other agencies for 19 projects.
- Technical and financial assistance continued for the development of automated transit communications, monitoring and data collection systems and the 100-bus test at the Toronto Transit Commission was successfully concluded.
- A contract was awarded to diesel division, General Motors of Canada, Ltd. for 53 articulated buses to be operated in Hamilton, Mississauga and Ottawa. Delivery is scheduled for 1981.
- Funding the development of light rail transit vehicles through the Urban Development Transit Corporation was continued.

Provincial Roads Planning Services Office

This office was responsible for developing and maintaining data information systems such as the provincial roads inventory and the provincial roads linear data reference system for the planning of the provincial roads programs. In addition, it provided policy and guidelines for corridor control and co-ordinated the review of land development programs.

The PRPSO was also responsible for the development and maintenance of quality and quantity standards, determined the desirable provincial road systems and reported on the provincial road system needs.

Access control classification maps were updated and a policy statement on the White Paper for a Revised planning act was produced as MTC's viewpoint.

Other services and products included:

- Access control directives; designation, assumptions; revocation criteria-processing; property dedication policy; highway classification maps for access controls.
- Provincial roads volume data; provincial OD data; annual desirable system maps; annual system deficiency (needs) maps.
- Application of quantity standards; assessment and recommendations for road transfers; review of inventory system; quantity standards policy; annual status of provincial road systems report; jurisdictional status reports.

Aviation Services Office

Ongoing staff responsibilities included the development and review of air policies and standards related to the Ministry's air program and overall administration. They also monitored federal aviation activities and programs which affected the province.

Although funding of the remote airport construction program was the responsibility of the Ministry of Northern Affairs (MNA), MTC was responsible for developing and administering it.

In 1979, the Ministry operated and

Continued on next page



Tractor trains are used to transport telecommunications equipment.

From previous page

maintained 15 airports in this area and two additional airports (Deer Lake and Sachigo) became usable in the fall of 1979, but were not fully completed until this summer. In addition, construction began on a new airport at Kasabonika.

The 1979 costs for constructing these airports was \$1,310,000.

The 1979/80 budget for subsidy towards construction of municipal airports was \$2,200,000. And significant developments took place at Ear Falls, Morrisburg, Brockville, Elliot Lake, Hornepayne, Parry Sound, Terrace Bay and Kingston. The budget amount for municipal airport maintenance, under which 13 municipalities received assistance, was \$244,000.

Aviation Services monitored the performance of norOntair, administered by the Ontario Northland Transportation Commission, and initiated a policy study on the future of the service in conjunction with MNA.

Personnel also provided technical support to the Legal Branch during the Canadian Transport Commission hearings affecting air services in Ontario.

Urban and Regional Transportation Planning Office

This office was responsible for ensuring the availability of up-to-date multi-modal transportation planning information, as required for strategic policy decisions, program planning and program delivery activities. Typical activities included:

- Monitoring urban and regional development trends to assess their long-range transportation impact and preparing provision of forecasts for provincial highway and GO Transit planning;
- Providing technical and financial assistance to Metro Toronto and other municipalities in the preparation of official plans;

- Co-ordinating provincial-municipal transportation planning efforts by conducting seminars, workshops, joint-planning studies, and developing common data collection standards for establishing time-series data bases and planning techniques;

- Conducting background studies on factors external to the Ministry such as changes in socio-economic characteristics, lifestyles and energy impacting on transportation;

- Undertaking systems-planning studies and preparing a long-range perspective for provincial highway program planning;

- Providing expertise and analysis while assisting the Ministry of Northern Affairs in program delivery;

- Developing procedures for transportation policy planning to ensure it will respond to expected changes in the external environment;

- Developing long-range perspectives on travel demand, using scenarios, land use-transportation co-ordination and

- Assisting in the establishment of a municipal transportation energy advisory committee to help initiate and co-ordinate energy conservation at the municipal level.

Co-ordinator, External Relations

The co-ordinator continued to establish and maintain a wide range of contacts with transportation agencies of other governments and the transportation industry with a view to ensuring that the Ministry, in developing and administering transportation policy, will project a consistent and accurate reflection of the views of the government.

The increasing emphasis on openness, accountability, reduction of red tape and clarification of the relative roles of the federal and provincial governments in areas of common involvement resulted in this role retaining a high priority.

The Economic Policy Office

This office undertook formal studies of transport issues and maintained informal contact throughout the transport sector, providing MTC with economic expertise. Divided into three sections, it dealt with transportation pricing and marketing; modal issues, trends and opportunities; and economic forecasting.

The modal group carried out the study of mineral aggregate transportation for the Ministry of Natural Resources and examined ways to transport them to market places from distant supply areas. The objective was to ensure future demand for mineral aggregates will be met with an adequate supply at the lowest possible cost.

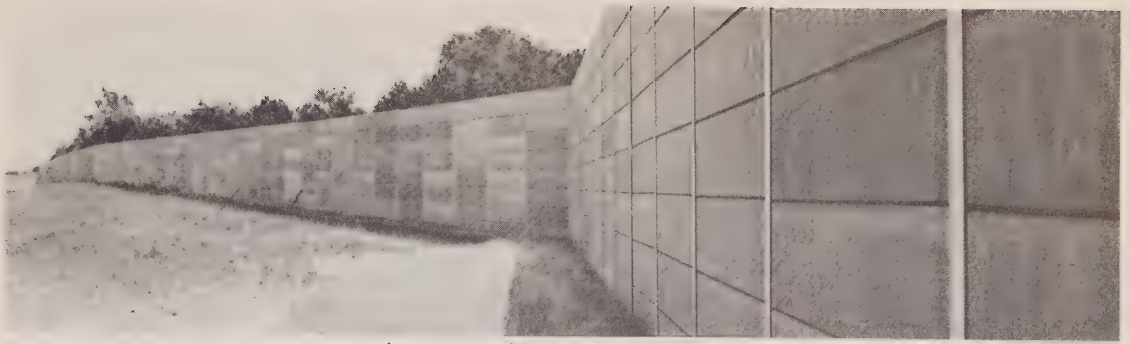
They also provided input to interventions before the Canadian Transport Commission (CTC) to present Ontario's views on particular applications for air services affecting the province. They

also reviewed air carrier rules and regulations set by the CTC, to promote the provision of a level of Ontario air service to meet the growing needs of business, the recreational traveller and cargo shippers.

As a result of railway applications to the CTC, branch line abandonments were investigated to determine the impact they would have on affected Ontario shippers and receivers. As well, passenger train service discontinuances and changes were examined to ensure adequate transportation facilities still exist, particularly in remote areas.

A study of the Uniform Classification of Accounts (UCA) for railways was also undertaken by this section. The purpose was to revise existing UCA which was 20 years old. The final report was issued in December 1979

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A new sound barrier on Highway 401

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and a public hearing was held in March, 1980.

Section personnel also participated in a railway costing system review, which has been the backbone of railway costing methodology in Canada for the past decade.

Staff compiled aviation, marine and railway statistics as part of an overall data package for all transportation modes.

Personnel were also provided for a committee investigating Ontario bus policy and its implications.

This section also completed a preliminary evaluation of the main components of the province's trucking regulation program and identified areas of further research.

Economic policy office staff aided in formulating the guidelines for the advisory body to the St. Lawrence Seaway Authority to be composed mainly of users of the system and providing a formal link for shippers, ship owners and other users, which would co-operate with the managing authority in setting, operating, planning and development objectives.

Monitoring of policy questions covering aspects from shipyard development to federal plans for a Canadian merchant marine, as well as continued involvement in the development of ports legislation was continued.

Office participation in the federal/provincial statistical committee led to publication of a draft catalogue of transport data files in federal and provincial agencies by MTC. This catalogue, printed by Statistics Canada, is for country-wide distribution.

Other office activities included:

The formulation of a special inter-governmental committee geared to presenting a consolidated government position on each issue, chaired by staff;

The transportation pricing and market studies section continued to be engaged in the Physical Distribution Consultative Program which assisted 17 firms.

The Physical Distribution newsletter was sent to over 9,000 firms each month.

Involvement with the Canadian Conference of Motor Transport Administrators continued with respect to uniform bills of lading for various modes, and related matters;

A study of freight rates to and from northern Ontario was initiated as an extension of a previous study now outdated;

Assessments of the effects of various rate increases, changes in transportation legislation and regulations, and transportation studies conducted by other regulatory bodies were performed on an ongoing basis. Transportation rate data was provided to other ministries on request.

The economic forecasting section continued its analysis activities on a broad basis, including monitoring economic trends and developments for senior management to facilitate appropriate responses with Ministry programs;

Specific analysis included:

- Economic impacts of GO electrification;
- Economics of concrete pavements;
- Road programs impacts;
- Truck traffic composition on the King's highways;
- Advice on demand for trucking services and trends in operating elements costs;
- Contribution of the provincial roads program to Ontario's export performance;

In areas of basic research, technical co-efficients to estimate impacts of highway construction expenditures were available from macro studies. However, they lacked sensitivity, accuracy and confidence needed for use in evaluating a specific program or project.

A micro-impact study is developing co-efficients based on specific projects and a tracing of final disposition of expenditures. The completed system will allow a more reliable and accurate assessment of employment, tax recovery, industry stimulation and provincial income effects of the highway construction program.

Research and Development Division

The Research and Development Division is comprised of the Executive Area, Engineering Research and Development and Systems Research and Development Branches and the Resource Management Office.

Executive Area

This office provided general administrative services for the division, including budget control, manpower planning, program and project approval, plus assignments to consultants and universities.

Engineering Research & Development Branch

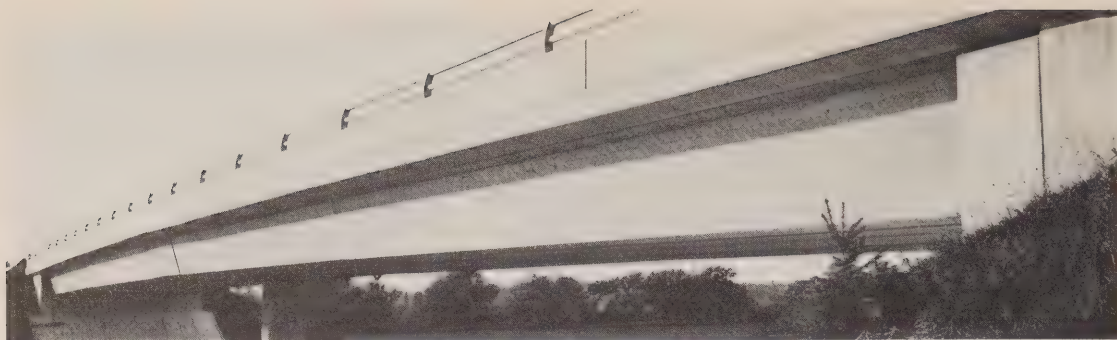
This branch conducted research and development to improve the physical attributes of the highways, pavements, bridges and other structures, materials and wayside equipment.

It also investigated pavement safety and carried out environment-oriented research related to skid resistance and noise barriers.

Pavement Research

Staff continued to develop better design methods for predicting pavement behaviour and performance, improved evaluating load capacity and load-imposing damage; researched techniques for protecting pavements from environmental effects and means of predicting and planning more effective rehabilitation and maintenance. Activities undertaken in the last year included:

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A new concrete girder bridge on Highway 417

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—Verification that pavement condition ratings (PCR's) subjectively arrived at by raters can be reproduced consistently by calculation from roughness evaluations and using weighted values of pavement distresses.

—Implementation of maintenance guide lines in 14 patrols located in five regions; guidelines were prepared to assist in uniform identification of pavement distress conditions and maintenance treatment alternatives; suggested the required equipment, materials and manpower; and determined which alternative was most cost effective.

—Task Force activities included:

- (a) Assisting in the promotion and technical analysis of hot-mix recycling projects and program development;
- (b) Preparation of technical material and economic analyses leading to the preparation of guidelines for the selection and use of concrete and composite pavements.

Earth and Environment Research

Staff conducted research into techniques for the use of earth resources in

highway building while minimizing man-made impacts on the user or environment.

Engineers worked at minimizing the adverse effects of erosion, scour and silting; to improve practices for weather-dependent maintenance and operations; and techniques for measuring environmental impacts, including:

—Continued surveillance of environmental effects of highway facilities in southern and northern terrains by remote sensing methods;

—A salt study in the town of Ballantrae to monitor the effect of winter salting operations on the groundwater and local wells affected over the past few years; (sampling of well points was carried out during the year to monitor the chloride ion concentration changes);

—Establishment of experimental natural vegetation plots adjacent to highways by allowing natural regeneration;

—A sewer inlet capacity study;

—Snow-drifting studies utilizing new types of nylon and polyethylene snow fences;

—Experimental site in Perth on Hwy. 17 utilizing styrofoam to correct deep-seated, severe longitudinal cracking in the pavement resulting from frost heaving over a longer section of highway in a swamp area.

Concrete Technology

Research focused on the physical properties, behaviour and in-service performance of portland cement concrete. Activities concentrated on the durability of structures and the methods for investigating corrosion damage to reinforced concrete.

Other highlights included:

—Assisting in the implementation of a policy requiring the use of epoxy-coated reinforcing steel;

—Preparation of a report developing decision criteria for selecting the most suitable method of repairing bridge decks, using the results of a bridge deck condition survey;

—Investigating performance of demonstration projects using concrete overlays and water-proofing membranes for bridge deck repair;

—Developing the use of infra-red thermography for identifying deterioration in reinforced concrete; and

—A preliminary investigation of the condition of bridge substructures and identification of the need for future research activities on this subject.

Technology Resources

This section worked on projects involving the advanced application of physical, chemical and electrical processes, while demonstrating special construction and maintenance techniques.

Other projects included:

—An investigation into the possible uses of waste materials, including sulfur, from the desulfurization of petroleum products and natural gas. (This product could be used in constructing asphaltic concrete roads);

—The use of ground-up rubber from used tires was investigated for use in

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Structural Research

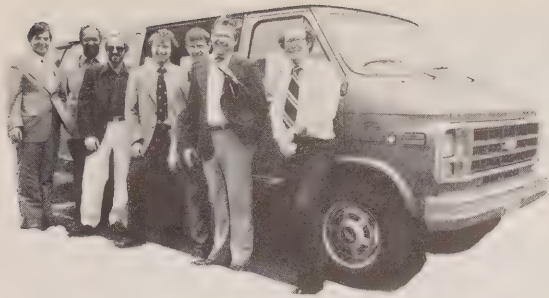
Staff was responsible for writing the Ontario Highway Bridge Design Code which was reorganized following publication. In addition, the number of technical subcommittees was reduced to 16 from 17 and the total membership raised from 65 to 85. Constitution of the reorganized task force included new members to address needs identified while writing the first code.

The code control committee was also reorganized, renamed the code development committee. The code implementation committee was created to introduce the code into practice and identify problem areas for further con-

sideration. These committees were served by a permanent secretariat. Second edition of the code is planned for June 1981.

Another program was centred around the transverse post-tensioning of laminated decks, proving that it increases the load-carrying capacity of traditional nailed structures by a factor of 3.5.

In co-operation with Drivers and Vehicles, staff carried out a survey of truck weights, including the weighing and measuring (axle spacings) of close to 5,000 vehicles.



Vanpooling pilot project located at Downsview

From previous page

asphaltic roads to reduce the disposal problem associated with used tires;

—Cathodic protection of reinforcing steel in concrete bridge decks was investigated and developed;

Highway Environment

This group was newly formed to deal with all physical aspects of road surfaces and road sites.

Activities included:

- Acoustic design advice was given for alternative locations and heights of noise barriers using computerized prediction methods for highway noise.
- The locations of high incidences of wet pavement accidents were identified, tested for skid resistance with subsequent recommendations for the improvement of "black spots". And demonstration projects on bituminous surface mixes with improved maintained skid resistance were continued.
- Seminars were held jointly with Ontario Hydro on energy saving through a change-over to more efficient light sources. And a computerized luminance method of design was supplemented by preparing a graphical-manual method using computed and plotted diagrams.
- Measurements of reflectance matrices of pavement surfaces were successfully carried out by University of Toronto consultants.

Systems Research & Development Branch

This Branch's responsibility was to provide systems research, development and implementation in new areas of transportation technology, in improved methods of operation, safety and energy use.

Transportation Energy Management Program (TEMP)

TEMP addresses the nearly total dependence of transportation upon oil.

Five categories of measures have been identified for achieving TEMP's aims:

1. Improvements to the efficiency of motor vehicle technology, including assessments of fuel-saving techniques, i.e. the use of efficient oils, tire types, block heaters, clutch fans and simplified maintenance procedures.
2. Improvements to the efficiency of transportation operations keyed on a joint government industry program, Trucksave which was aimed at the promotion of fuel-conserving practices and technology.

A further element of the program was the creation of a special municipal transportation energy advisory committee to publicize and coordinate Ontario conservation initiatives.

3. Car and vanpooling was strongly promoted with a carpool matching program established for staff at Ryerson Polytechnical Institute. Since the three-van demonstration at MTC's head office, vanpool presentations were made to 45 private corporations and nine Ontario municipalities.

Additional activities included the identification of parking sites near large cities suitable for car and vanpooling.

4. To reduce travel demand on teleconferencing demonstration was undertaken within MTC linking Downsview with Queen's Park and the four regional offices located outside Metro Toronto.
5. To develop alternative fuels a methanol test program was under-

taken jointly with Transport Canada to assess the utilization of 10 and 15 percent methanol-gasoline blends in automobiles.

And a propane fuel feasibility study was carried out.

Drivers and Vehicles Research

This office's responsibility was to conduct research and development in support of the Transportation Regulation Program.

During 1979-80, research was directed toward the completion of ongoing projects and development of new research initiatives in the areas of driver training, education, qualification and truck compliance, including:

- The evaluation of the safety education program in Ontario schools from kindergarten to grade XIII;
- The evaluation of the Driver's Handbook;
- The completion of a three-part film on impaired driving in cooperation with Public & Safety Information staff, and initial development of instruments and exercises to guide the teachers and students in classroom situations;
- The evaluation of the demerit point allocation scheme and continued evaluation of the driver counselling program;
- The continued development of driver models for the improvement of research capability;
- The initial examination of the potential application of driver motivation in the improvement of driver safety;
- The initial evaluation of existing driver's licence tests and the development of improved tests;
- The completion of studies to determine the effects of seat belts;

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From page 11

- The completion of tests and evaluation of self-steering trailer axles, air-lift axles, jackknife-control devices and wide-base radial tires;
- The determination of the most effective five and four platform configurations for weighing scales to be considered for truck inspection stations;

Transit Systems

Staff conducted research, development and demonstrations in transportation planning techniques, supporting other Ministry offices, municipal transit properties, and the transit industry.

Activities which supported energy conservation programs included:

- The monitoring of electric road vehicle development; and support for a study of transit system electrification, stressing urban and suburban bus route electrification.
- Work continued on rail vehicle noise and truck dynamics. Models of rail vehicle/truck dynamic behaviour were validated through experimental tests conducted with the TTC.
- Support provided in the design and operation of underwater air bubbling systems for winter ferry operations.
- Activity began on load calibration for elevated transit guideways.
- Personnel worked with the transit office, evaluating proposals, and undertaking development and design review activities in the articulated bus demonstration as well as the development of safety standards for transportation for the disabled.

Control Systems

This office conducted research and development in transportation control systems. Major activities during the past year included:

- Completion of the procurement phase of the Municipal Traffic Control Systems (MTCS) for Brantford and the regional municipalities of Waterloo and Durham.

- A feasibility study of a computerized corridor traffic management system for the 401 Toronto bypass was completed;
- The expansion of the QEW freeway surveillance and control system to Cawatha, and Ford Drive and the specification of a new computer and control center for installation at Highway 10;
- Initiated remote monitoring of traffic data on Highways 2 and 5;
- Completed cooperative studies with Mississauga/Peel and Oakville/Halton on the effects of ramp metering on the QEW;
- Provided technical support to the Ministry's Type 170 Micro-processor signal controller program, particularly for intersection and ramp metering control software development.
- Completed a feasibility study of an automatic telemetry system (via telephone lines) for the Ministry's 21 permanent counting stations in Ontario;
- Initiated a study to identify the energy impacts of various traffic control strategies with emphasis on

the evaluation of replacing STOP with YIELD signs;

- Completed an investigation of vehicle traffic detectors; published a standard procurement specification and detailed guidelines on the design and installation of loop detector systems; and

Experimental Demonstration & Testing Office

This group provided support for experimental work by R & D project groups, including providing engineers, technicians, and drivers; electronic, acoustical and strain gauge instruments, and staffing test track, dynamometer and laboratory facilities.

During the past year, assistance was provided for such major projects as:

- Bridge testing;
- Articulated vehicles research;
- Methanol alternative fuel research;
- Subway wheel noise and vibration characteristics;
- Survey and assessment of roadside noise barriers.

Resource Management Office

This office advised on, and implemented policies and strategies for financial and human resource utilization within the division. It also coordinated the implementation of findings; managed an effective technology transfer to and from the division; and developed value engineering concepts and systems for the Ministry's use.

The Management and Assessment Section provided an overall monitoring and assessment of resource management for the division; recommended and maintained long-range plans for R & D programs and sub-programs; evaluated programs and projects on their effectiveness and advised on overall division priorities; administered various Ministry management, accounting and assessment processes for the division (multi-year planning, management-by-results etc.); and acted as liaison with the resource planning committee and other financial management functions for policy applications.

The technology transfer section was responsible for technical information dissemination to target audiences within MTC, industry, the general public, and other provincial, national and international governments and institutions. It directed the printing, publication and distribution of technical reports, papers, research abstracts, implementation packages and audio-visual presentations; designed, edited, illustrated, typeset and published reports and brochures for other sections and divisions within the Ministry. Studies included developing up-to-date societal and personal costs of motor vehicle accident injuries; producing vehicle operating costs to reflect present vehicular models; developing measures of highway service; upgrading the highway capacity manual to reflect Ontario conditions; establishing measures of effectiveness; studying the effectiveness of recycling old highway pavements; and implementing the OPAC pavement design system.

Operations



Tandem plowing on a freeway

Regional and District Operations

Responsibility for field operations of various Ministry programs has been decentralized to five regional and 18 district offices within the regions.

Regional offices are located in Toronto, London, Kingston, North Bay and Thunder Bay, providing for the following program delivery activities:

- Highway maintenance, design and construction
- Airport construction and maintenance
- Administration of municipal road subsidy
- Driver examination and vehicle inspection
- Enforcement of The Public Commercial Vehicles Act, Public Vehicles Act, Highway Traffic Act and The Motor Vehicle Transport Act (Canada).

Northern Region

Construction

Major construction projects included continuation of four laning in the Huntsville, North Bay and Sudbury areas on Highways 11 and 17. Construction was also completed on Highways 11, 63, 65, 141, 577 and 629 as well as hot-mix paving on Highways 11, 17, 144 and 655.

Maintenance

Summer maintenance was carried out on some 3,478 miles (5610 km) of King's secondary and tertiary highways. Two ferries were operated — at Moosonee and Gardiner.

In addition, other maintenance included: gravelling, priming, surface treating, mulching, asphalt patching.

Winter maintenance was conducted on most of this mileage. Salt usage decreased to 73,000 tonnes from 80,813 the previous year. This 9.67 per cent decrease was attributed mainly to relatively mild weather.

Privatization in the repair area of the garage operation was continued. During the past year, sign shop manufacturing was centralized to one shop located at North Bay and appears to be working well.

Municipal

Staff administered various road assistance programs to 131 organized municipalities (one county, two regions, three cities, 35 towns, seven villages, 79 townships, four improvement districts), 17 Indian reserves, 115 local roads boards and 12 statute labour boards, including subsidy development roads and connecting links in organized areas and special and specific allotments in unincorporated areas.

Engineering and Right-of-Way

This office completed 25 sets of contract plans and documents relating to property acquisition and granular source lists which represented a program value of \$50,470,000 — 60 per cent was done in-house and 40 by consultants.

Staff also continued to carry out pre-contract engineering work to support the five-year construction program. It consisted mainly of engineering surveys, legal surveys, plans preparation, geotechnical and structural investigations, property acquisition and contract plan preparation.

Drivers and Vehicles

A staff of 20 driver examiners conducted 43,857 pre-examination and

22,217 road tests at 28 testing facilities.

A total of 3,775 heavy commercial motor vehicle inspections were carried out at truck inspection stations and roadside inspection sites by a staff of 11 vehicle inspectors. A total of 4,981 cars and light trucks were inspected by portable inspection lanes travelling throughout the region with a total of 767 vehicles removed from service for safety related defects.

Altogether, 108,996 commercial motor vehicles and buses were inspected by a staff of 15 inspectors at five permanent inspection and four audit stations plus eight mobile patrols. As a result, 4,929 reports of suspect violations were processed.

A total of 1,135 interviews were conducted by one counsellor with drivers reaching the nine demerit-point level under the demerit point system. These drivers were all located in the northern region.

North-western Region

Construction

Construction was carried out on Highways 11 and 17 while two contracts were initiated on the Bending Lake Road and grade work carried out on Highway 812.

Maintenance:

In addition to routine summer and winter maintenance, capital maintenance projects including bridge and culvert repairs, prime and surface treatment and maintenance crushed gravel contracts, were carried out.

Municipal:

During the year, 69 municipalities and 12 Indian reserves received regular subsidies amounting to \$12,540,547.

Continued on next page



Highway maintenance is a continuous job

From previous page

Office staff undertook eight connecting link projects at a cost of \$2,549,200 and provided a further \$117,500 towards maintenance of links within towns and villages. Five development road projects totalling \$262,500 were completed. Some \$2,168,314 was provided to 109 local roads boards, 11 statute labour boards, 66 Indian reserves and informally-organized groups involved with public roads not under MTC's jurisdiction.

Engineering and Right-of-Way

Office staff completed 29 sets of contract plans and documents with related property acquisition and granular sources list of which approximately 65 percent was done in-house and the remainder by consultants.

They also continued to carry out preliminary design studies for future highway improvements as well as pre-contract engineering to support the five-year construction program, consisting mainly of engineering surveys, legal surveys, plan preparation, geotechnical and structural investigations, property acquisition and contract plan preparation.

Drivers and Vehicles:

Drivers and vehicles staff conducted 25,456 pre-examination tests and 15,508 road tests while 1,806 demerit-point interviews and 57 medical hearings were completed.

Vehicle inspection staff handled 3,635 inspections of commercial motor vehicles, resulting in 155 charges. A total of 1,048 buses were also inspected and 3,791 motor vehicles were inspected at the portable inspection lanes of which 2,921 were found defective.

The highway carrier section inspected 107,655 commercial motor vehicles resulting in 3,656 charges being laid.

The regional motor vehicle licence issuing office licensed 48,095 vehicles.

Remote Airport Program:

While 15 remote northern airports were maintained, construction continued at Sachigo Lake and Deer Lake.

Central Region

Construction

Major construction contracts on the Oakville link of Highway 403 were awarded and work continues to proceed at an accelerated rate. Widening of Highway 11 from Toronto to Richmond Hill, plus Highway 5 from Trafalgar Rd. to the Guelph Line was completed. Work was also carried out on Highways 23, 7, 12, 28, 36, 401, 404, 406 and the Queen Elizabeth Way (QEW).

Maintenance

Approximately 4,666 km of two-lane highways were maintained. In addition, there were three patching contracts requiring 55,300 tonnes of hot-mix material.

During the winter, 258,000 tonnes of sand and 100,000 tonnes of salt were spread on highways in the region while 23 new traffic signals were installed during the year.

On Toronto district freeways, emergency patrols continued to operate, driving approximately 850,000 km while providing assistance to 24,500 motorists and dispensing 10,700 litres of gasoline.

Municipal

During the year, 115 municipalities and six Indian reserves received regular subsidies under the Public Transportation and Highway Improvement Act. In addition, 16 municipalities received subsidies under the Traffic Signal Program.

In 1979, this office administered a connecting-link program involving 48 projects with a provincial contribution of \$4,335,000, including \$235,000 for maintenance in towns and villages.

The Development Road Program consisted of two projects and an expenditure of \$112,000.

Engineering and Right-of-Way

A total of 53 projects were prepared for contract advertising, primarily

associated with freeway designs on Highway 403 in Oakville-Mississauga area, and Highway 401 east and west of Metro Toronto.

In addition preliminary design was completed on the QEW in the Burlington Beach area and continued on proposed sections of Highway 410, 403, and 407.

Drivers and Vehicles

Staff conducted 286,041 pre-test examinations and 226,239 road tests for driver license applicants. Nine driver improvement counsellors conducted 21,585 demerit-point interviews, 518 hearings and 157 accident-repeater interviews.

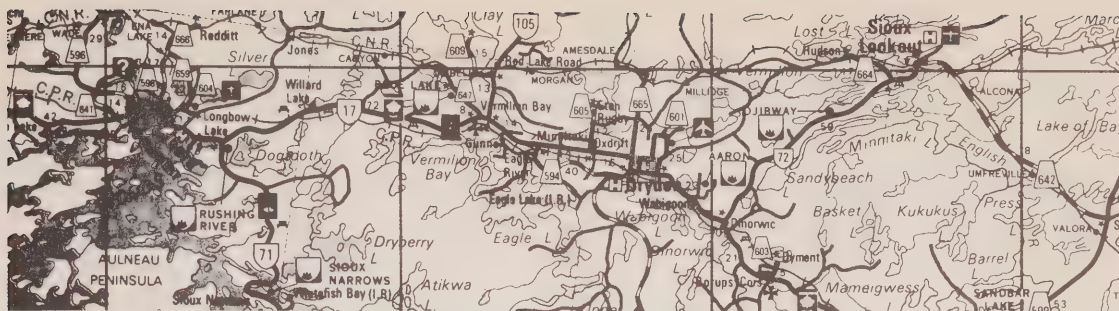
Staff checked 24,183 commercial motor vehicles at roadside and truck terminals of which 4,553 were removed from service or tagged as unfit. A total of 52,425 cars and light trucks were inspected at either permanent or portable lanes of which 4,314 were found with serious defects. Approximately 2,513 school-purpose vehicles and 413 commercial buses were also checked out.

Highway carrier staff inspected 1,593,762 vehicles, resulting in 14,812 court convictions.

South-western Region

Construction

A further 27.2 km section of Highway 402 was completed during 1979 and 61.2 km of Highway 402 between Sarnia and Strathroy is now open. Work continued on the E.C. Row Expressway in Windsor with the award of contracts for a structure crossing the CPR mainline, and placement of fill for various interchanges. Contracts for construction or reconstruction were also awarded for the St. Thomas Expressway, Highways 401, 40, 80, 2, 11, 400, 18, 78, 27, 59 and the Woodstock by-pass.



Maintenance

Approximately 20,000 tonnes of asphalt was placed and 10,000 tonnes of crushed gravel used under eight hot-mix patching projects. Two-foot partial paved shoulders were placed on Highway 2 between Lambeth and Delaware and Highways 6 and 10, Chatsworth to Owen Sound.

Under the Hazard Removal Program, approach treatment was completed at seven structures along the 401; many stumps removed in London district and numerous culvert ends buried in Stratford district. Other work included installation of traffic signals, replacement of bridge deck joints and seals on seven structures and intersection improvements at three locations in Chatham district.

Due to a mild winter, the amount of salt and sand used for de-icing regional highways was less than used in previous years.

Municipal

A total of \$97,922,120 in subsidies was paid to region counties/townships and municipalities. Thirty-two connecting link projects received approximately \$5,300,000 and 10 development road projects received approximately \$835,000.

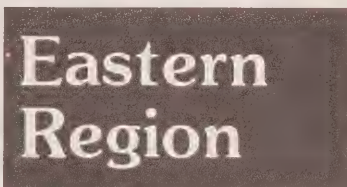
Drivers and Vehicles

Seventy-four examiners located at 21 examination centres and operating 24 travel points conducted 128,048 pre-examinations and 94,991 road tests for licence applicants. And driver improvement counsellors conducted 11,748 demerit point interviews and 514 hearings.

Vehicle inspectors checked 3,564 school buses; 701 highway coaches,

church and transit buses, and wheel-chair vehicles; 7,954 commercial motor vehicles and operated three portable inspection lanes and of the 13,323 vehicles inspected at these lanes, plates were removed from 2,440, found to be unfit.

Highway carrier staff inspected 478,076 commercial motor vehicles at truck-inspection stations, resulting in 8,415 court convictions and 13,164 inspection reports.



Construction

Work on Highway 17N continued with a 9.8 mile section of Highway 17N bypassing Petawawa which was opened in the fall of 1979. Work was begun on an 8.4 mile section of the Pembroke Bypass and the Madawaska River Bridge on the Arnprior Bypass. Construction or reconstruction was carried out on Highways 401, 2, 7, 17, 29, 31, 32, 41, 43, 62, and 503.

Maintenance

Major summer maintenance activities covered 4,071 km of centre line and 3,668 km of edge line painting. Approximately 9,029 trees and shrubs were planted while 37 traffic signals and 22 illumination installations were carried out.

Major winter activities consisted of the plowing of 4,452 km of highways together with the spreading of 58,019 tonnes of salt and 70,943 tonnes of sand.

Kingston and Ottawa districts concluded the phases of the research projects begun last year into the varying rates of salt application and the optimum use of sand in ice control.

Municipal

A total of \$72,187,800 in subsidies was paid to region counties, townships, municipalities and Indian reserves. In addition, 24 connecting links received \$2,778,760 in assistance and 41 development roads received \$3,600,000. Provincial contributions were also made to the airport program, \$355,000; ferries, \$478,310; and for traffic signals, \$310,500.

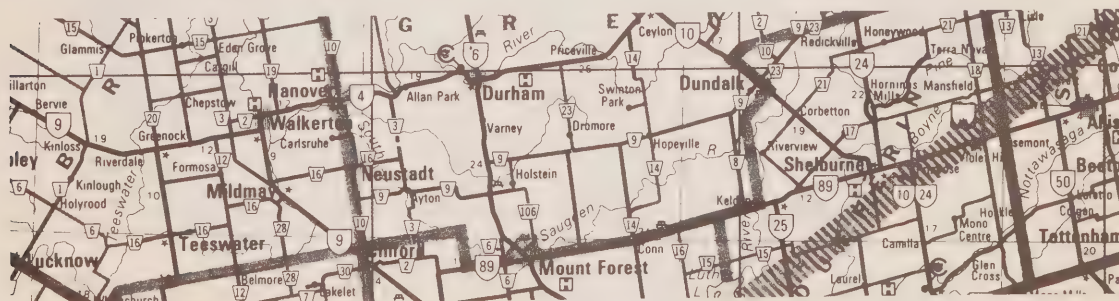
Engineering and Right-of-Way

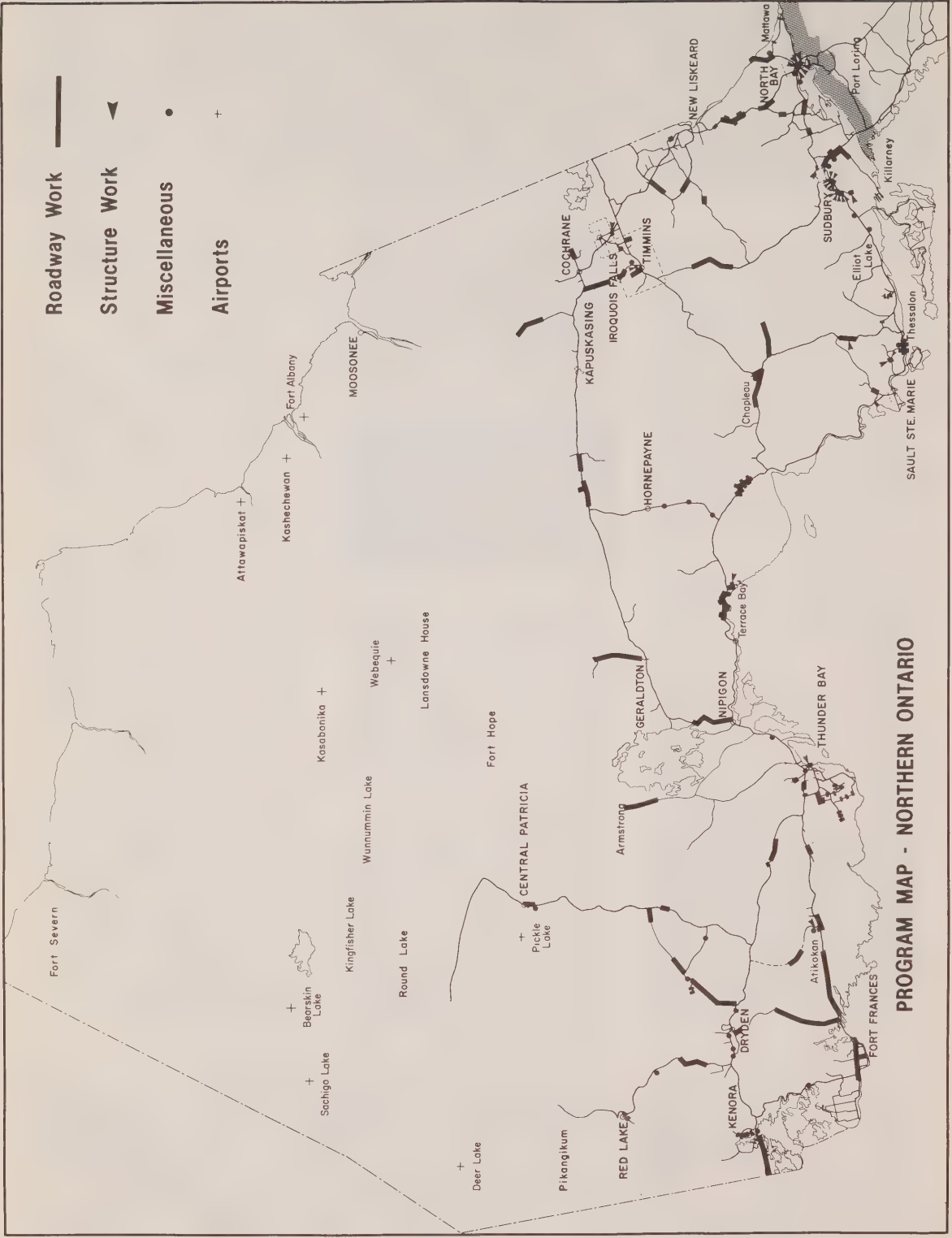
Contract drawings and documents were prepared for 30 construction projects. A major design project included the Norris Whitney Bridge which will provide a high-level crossing over the Bay of Quinte between Rossmore and Belleville. In addition, preliminary design work continued on the rehabilitation of the Ottawa Queensway.

Drivers and Vehicles

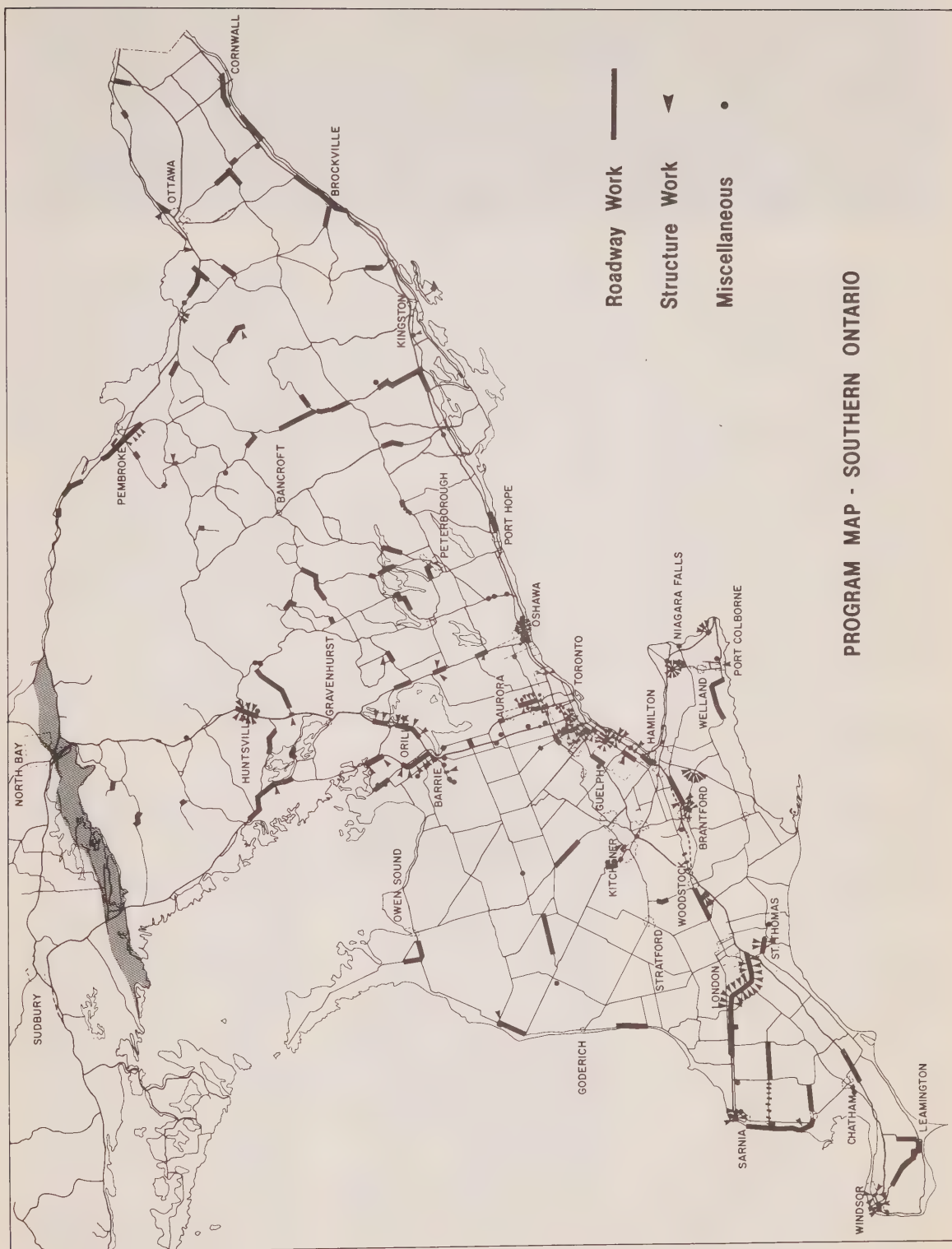
91,766 pre-examinations and 58,943 road tests were conducted by staff for driver's licence applicants. Driver improvement counsellors interviewed 4,106 drivers who had attained nine demerit points.

The inspection of 5,863 vehicles was carried out at road-side or inside truck terminals. Another 7,432 passed through portable inspection lanes of which 922 had serious defects. School bus inspections totalled 3,843 while highway carrier inspectors checked out 213,040 vehicles.

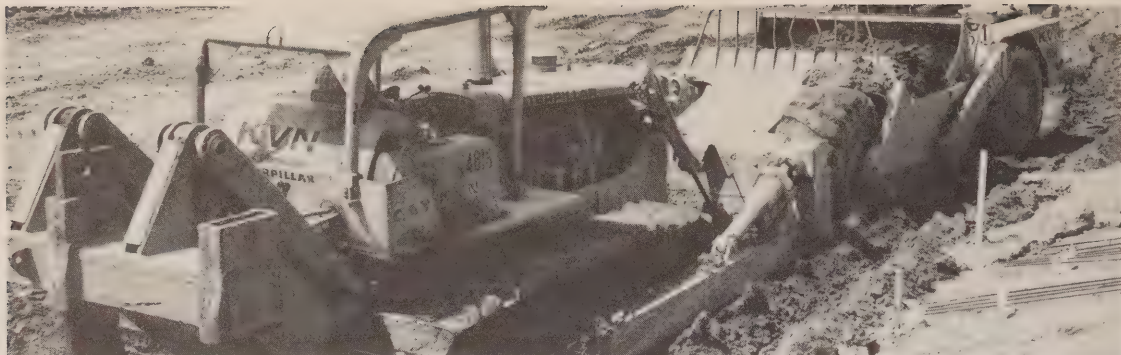




PROGRAM MAP - NORTHERN ONTARIO



PROGRAM MAP - SOUTHERN ONTARIO



Construction on Highway 404 north of Toronto

Highway Engineering Division

This division was responsible for the development of highway engineering and survey policies, procedures and standards in the fields of design, construction, maintenance, traffic engineering, engineering materials, structures and surveys.

Staff were also responsible for providing a design service for structures, structure foundations, electrical installations and major landscape work.

Consisting of the Design and Construction Branch, the Maintenance Branch, the Engineering Materials office, the Environmental office, the Structural office and the Surveys and Plans office, the division reports to the ADM, Operations.

Design & Construction Branch

This branch, consisting of the Highway Design, Specifications & Standards, Contract Preparation & Control, and Contract Management offices, was responsible for the development and improvement of policies, procedures, specifications and standards, relating to the design and construction of highways and their facilities.

Specifications & Standards Office

Specifications, highway engineering standards with related policies and procedures for the design, construction, maintenance and safety of highways were provided.

S&S personnel worked on Review of Engineering and Contract Administration Project (RECAP) committees. They also issued 21 new or revised construction and material specifications and six revised purchasing specifications. Conversion of material specifications to metric units proceeded only where the industry or manufacturers had converted. And staff issued 27 new and 36 revised special provisions.

The highway engineering standards people completed the conversion of engineering standard drawings to metric units and issued the new manual. The manual of electrical standards in metric was issued by the section and a new manual of structural standards in metric is being prepared for printing and distribution. The design manuals for traffic barriers, energy attenuators and light poles were revised and converted to metric.

Three policy statements were issued and this office developed and updated 235 standards and modified 145.

Highway Design Office

Staff were responsible for four major areas of design policy — preliminary, detail, hydrology and electrical.

A major revision of the Geometric Design Manual was begun. It was designed to incorporate changes in vehicle size and operational characteristics. A manual on the turning characteristics of oversize loads was prepared to facilitate decentralization of the permit issuing process for oversized and/or overweight vehicles. Guidelines on the impact of highway construction on roadside vegetation were also prepared.

In detail design, several changes to the contract package were implemented or are under study, including the paying of bid items on the basis of the estimated quantities. A report on mass-haul techniques received regional approval and various designs for noise barriers were evaluated.

Significant work was carried out on

the MTC Drainage Manual. One chapter of the Bridge Hydraulics Manual was also published. Work progressed on other hydrological matters such as Drainage Act amendments and design flood policy.

Electrical design and development staff completed the traffic signal design standards, metric conversion of electrical standards and an Electrical Inspection Manual for construction.

Electrical design drawings and documents for electrical installations on about 315 projects were completed with approximately 51 percent handled by engineering consultants.

Highway design staff also retained a consultant to develop standard plans and specifications for buildings at MTC patrol yards and truck inspection stations.

Contract Management Office

This office was responsible for development of new policies and procedures related to the improvement of contract and manpower management including staff training. It also provided technical recommendations on matters above regional authority. In the last year, this office:

- Continued its participation in MTC's quality assurance in construction projects and implemented recommendations;
- In order to reduce contract administration costs, the Ministry introduced a policy of plan quantity payment. This policy will permit payment being made to the contractors on the basis of the designed quantities on the plan. Initial implementation procedures for plan quantity payment were started;
- With the rising costs of liquid asphalt cement, an interim policy was introduced for the utilization of hot-mix recycled-asphalt pavements on current and future paving work.

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MTC ferry the Wolfe Islander III in Kingston Harbour

From previous page

Estimating Office

The Estimating Office, operating with a complement of 25, prepared the official cost estimates of 288 contracts with a tender award value of \$247,974,461.78. Recommendations for award were made to senior Ministry officials on 277 contracts and non-award in 11.

Periodic reports on construction costs, equipment rental and truck-haul rates were produced for use internally and in the private sector.

This office also produced numerous cost comparisons and preliminary-project value estimates for budgetary purposes; provided technical input to committees, task forces, with special emphasis in the area of energy; and co-operated with consultants and other governmental agencies, both provincial and federal, in construction-cost related matters.

Environmental Office

This office is responsible for development and co-ordination of natural and cultural environmental policy, guidelines and procedures, relative to all Ministry programs. Liaison is maintained with many MTC offices and agencies. On April 1, 1979, it became part of the Highway Engineering Division.

During 1979-80, liaison and technical assistance continued with the Toronto Area Transit Operating Authority, (TATO) the Ministry of Northern Affairs, the Communications Division, the aviation services office and regional offices relative to exemption requests and the preparation of environmental assessments under the Environmental Assessment Act, 1975. And seven environmental assessment class documents were accepted and approved by the Ministry of the Environment (MOE). And three were prepared and submitted to the MOE for TATO, in addition to one previously submitted. One similar assessment was prepared

and submitted for remote northern airports.

As part of environmental technical development work, evaluations were made of the cost-effectiveness of particular environmental measures in design and construction. Issues related to archeological and heritage resources and natural vegetation in highway environment were the subject of extensive examination.

Contract Preparation & Control Office

Staff was responsible for preparation of final documents for tendering Ministry contracts. During the bidding period, they also provided clarification or official interpretation of contractors. During the past year, 223 contracts for award were processed.

Maintenance Branch

A preventive maintenance program was started to ensure that pavement maintenance funds are allocated to optimize pavement life; and a task force assembled to remodel and integrate maintenance management with Phase II of the operations management system.

The potential benefits of using solar heating in patrol garages was studied and while it was concluded that active solar heating was not practical with the available equipment, many other changes resulting in energy savings were identified.

Total roads snowplowed during the winter months was 21,444 km while 373,500 tonnes of salt and 887,100 tonnes of sand were used on all Ontario highways. The winter maintenance research project to review salt use continued and a final report is expected late in 1980.

Special Maintenance Services

Progress was made in evaluations of various pavement marking and traffic control products and devices and subsequent development of standards and policies.

Test applications of permanent-type pavement marking materials, thermoplastic and marking tape, were subjected to regular field inspections. After two winters' exposure to traffic on the Toronto bypass, performance results were encouraging. Use of such materials eliminated several applications of conventional paint and appeared to be a cost-effective operation, particularly on high-wear highways. Monitoring of these and other permanent-type markings will continue.

New safety procedures for pavement marking to be used during hot paint zone striping operation were developed and subsequently issued as provincial roads directive C-33.

Test installations of two more types of raised reflective road markers were established, bringing to three the number of types being evaluated. Performance, including resistance to damage by snowplow and other traffic, has been monitored by the districts and maintenance branch staff since installation. A final report is expected later this year.

Following field evaluations of various types, sizes and colours of markers to delineate the median of divided multi-lane highways, a new standard was established and circulated as provincial roads directive C-62.

The field evaluation of a variety of plastic flexible delineator posts continued. Units were installed over the past couple of years to investigate potential as alternatives to our standard steel posts. Sufficient performance data was obtained to eliminate one type while further monitoring will be required to complete the evaluations of others.

The districts had 19 strippers in operation during the year, eight hot paint and 11 standard paint machines,

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MTC zone striper

From previous page

which zone painted 12,000 km and 12,500 km respectively, of King's and secondary highways. In addition, a total of 15,300 km of edge line were painted. And district staff manufactured and erected 64,000 square metres of highway signs.

Electrical Maintenance Section

The following summary highlights the activities of the Electrical Maintenance Section during the fiscal year.

- Microprocessor type traffic signal equipment was acceptance-tested and technical expertise provided to districts for installation and maintenance. The first unit was placed in operation on May 10th, 1979. Ministry now has approximately 25 units of the Model 190 and 170 microprocessors operating at intersections throughout the Province.
- High pressure sodium sign lighting luminaires were installed on four overhead truss signs as a test installation to determine the effect of the colour differential from the existing types. The results were favourable and will permit energy and maintenance cost reductions.
- Specification for photo-electric control was finalized and published; this was initiated in an effort to reduce the time span that roadway illumination was used to reduce energy requirements and costs. All controls are now being purchased to the new specification and districts have changed existing units to conform to the lower levels.
- Directives B-59 and B-62 relating to conversion of existing illumination to high pressure sodium type were prepared and issued. The purpose of this program is to reduce energy

usage on provincial roadways and to reduce costs.

- Portable battery-operated traffic signals were evaluated and approved for use on construction and maintenance projects. Specifications were prepared and issued to Regions. Section 96a of The Highway Traffic Act now permits the use of portable lane-control signal systems during construction or maintenance activities, on or adjacent to a highway. MTC has purchased three complete sets of these signals for use in Northern and Eastern Region.
- Directive C-68 was prepared and issued for construction and updating of electrical work by private contractor instead of Ministry staff. In conjunction with this, Maintenance Branch participated in the preparation of an electrical inspection manual for training of inspectors on electrical contract projects. A series of training sessions has now been held with candidates attending from construction and electrical maintenance sections in the Regions and Districts.
- The high mast illumination system on Highway 417 and Queensway in Ottawa was recommended to be changed from clear metal halide type lamps to clear mercury vapour lamps. This can be accomplished without any modifications required to the luminaires or electrical system. Significant maintenance savings have been realized due to

the longer lamp life and lower cost of the lamps. Lighting levels in the area are slightly lower but no adverse effects have been noted, as uniformity of lighting levels has been maintained.

- Training for District staff was coordinated for a number of courses relating to electrical work.
- Forty-six trips were made to the districts to monitor and provide technical expertise relating to various aspects of electrical maintenance functions.
- Recommendations were made to Regions and Districts to use a more resilient type of loop-detector roadway sealant that remains flexible even in extreme cold. In areas where this has been used, maintenance costs for traffic signals have decreased due to fewer loop failures.
- A policy was developed for the use of auxiliary devices for the pre-emption by emergency vehicles of traffic control signals owned and operated by the Ministry.
- A study was completed on the use of combination pedestrian push-button controls at signalized intersections. The use of a pushbutton and symbol sign combined together has been approved as a Ministry standard for all future requirements. It will be incorporated in the Design Standards for electrical work.

Landscape Planning & Operations Section

A total of 74 landscape planting projects was carried out in 14 districts using 69,523 units of plant material. Major landscape contracts were completed on E.C. Row Expressway at Windsor, Highway 402 at Sarnia, Northwest Metro Arterial, and Highway 404 in Toronto; and interchanges on the QEW at Dorval Drive and Black Creek.

There were 94 planning and design projects requiring input from the Landscape Planning group. Some 30,700 acres were treated with herbicide for weed and brush control with activity in all 18 Districts. Based on vegetation-control trials at three locations, data was established on eight new products. Comparative tests were carried out on three mulch products for grass seeding and erosion control.



Highway 401/427 interchange ramp

Signs and Building Permits

Building permits issued by the 18 districts under the policy directions of head office totalled 3,399 with a value of \$425,504,297.

The number of field advertising permits issued was 7,284 valued at \$82,725; 2,410 guide sign permits were issued generating \$41,902 in fees.

Other permits issued including 1,255 encroachment permits valued at \$10,183; 2,149 entrance permits; 9,064 new or renewed sign permits.

Traffic Engineering Office

The traffic analysis section participated in six municipal traffic operations studies and initiated a further five. In addition, the results of a demonstration project, involving monitoring of CB radio, were evaluated, leading to the installation of CB radio base stations in 40 OPP detachments on the provincial freeway system. Development of portable lane control devices was followed by introduction of legislation authorizing use of these devices under The Highway Traffic Act.

Traffic information systems development staff continued the program of special traffic data collection, primarily using summer students. In addition to the normal origin and destination studies, a survey was conducted, in co-operation with the Ministries of the Solicitor-General and Attorney-General, into the blood alcohol levels of Ontario drivers on a sample basis.

The section has also participated in the development of electronic warning devices.

As part of a project team, the computerized accident information system has been developed to the extent where all standard outputs are on file, with special outputs available on user demand.

The traffic signing section introduced 10 new sign standards and six policies,

including the maximum weight on bridges multiple posting sign, the revised travel information signs and the new block parent program sign. Municipalities are participating in the latter. The six diagrammatic signs were designed for the freeway system.

The newly formed construction signing committee completed 60-65 percent of the new uniform signing standards and it's expected the new highway work operations manual will be published within a year.

The pamphlet "Signs for Recreational and/or Resort Establishments and Cottages" was published in both French and English and made available to the public.

Traffic control development staff began physical expansion of the freeway surveillance and control project on the QEW in Mississauga with a changeable message sign. An additional interchange sign was partially operational by the end of the year. Some preliminary data was collected as part of proposed projects in the Burlington Skyway area.

A "Too Fast" sign installed on Highway 11 at Gravenhurst, the recently completed Thorold Tunnel emergency traffic signals and an over-height vehicle detector recently cleared for field installation, were examples of staff contribution to design and testing.

The microprocessor-based traffic controllers purchased last year are now installed, and several were in service last winter. Excellent performance was reported. An order for 250 units was placed for delivery later this year.

One aspect of the microprocessor controller program was establishment of the manufacture of the cabinets, controllers and major accessories in Canada as part of MTC's policy to establish a Canadian source of traffic control equipment.

Other developments included establishment of a properly equipped testing laboratory and evaluation and development of diagnostic software for use in quality control testing of new traffic signal equipment.

Engineering Materials Office

Engineering materials office personnel underwent reorganization during 1979-1980, including the amalgamation of the laboratory services unit with their respective sections. Staff complement was reduced from 128 to 114 during the fiscal year.

Pavement and Foundation Design Section

This section took a leading role in the recycling of asphalt pavement, sulphur asphalt, partially paved shoulders, pavement maintenance, quality assurance (Phase II), and interim guidelines of the granular materials working group task forces.

Foundation investigations were carried out at 53 bridge sites of which nine were in municipal jurisdictions. Eleven projects were handled by geo-technical consultants. And 35 foundation investigation reports were produced for contract purposes.

Special projects were undertaken to compare various methods of calculating pile capacity particularly pile analyzer, settlements within high rock-fill, instrumentation of footings on compacted granular material and compilation of pile-load test data for tests carried out by MTC during the last 20 years.

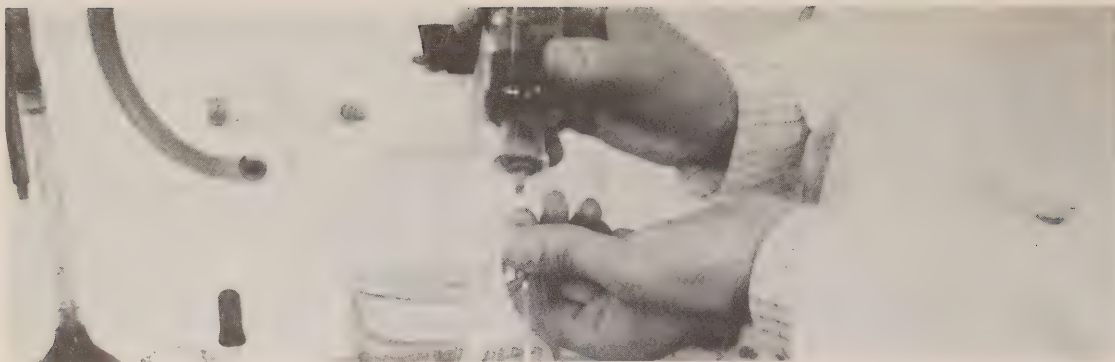
Bituminous Section

Specialist service was provided on all aspects of bituminous materials and construction.

Road roughness readings by the Mays Meter unit were obtained on over 5,000 km of highway for construction, precontract engineering programming and calibration. A final report on the activities was completed.

The project requested by Ontario Road Builders Association (ORBA) to

Continued on next page



MTC has extensive laboratory facilities

evaluate retention time effects on asphalt cement hardening of hot-mix in storage silos was completed with recommendations to senior management.

Field testing was completed and acceptance made of the first emulsified primer which will reduce pollution and conserve non-renewable resources (cut-back asphalt). A laboratory test manual for bituminous testing was completed.

Strategies, guidelines and experience in recycling hot-mix asphalt pavements with a view to conserving aggregates and asphalt products were developed.

Joint action with Engineering Research and Development Branch involved experiments with sulphur asphalt hot-mix, rubberized asphalt hot-mix, Verglimit de-icing hot-mix, and the performance of high skid resistant hot-mix surface courses.

Chemicals Section

Continued activities related to: the maintenance and updating of the designated sources list of materials used on construction and maintenance

operations; provision of expertise for all regions; evaluation and quality assurance testing on zone-marking products; investigative and testing programs of privately and MTC owned water wells as part of an effort to reduce or prevent salt contamination resulting from Ministry operations.

Initiatives were completed in the following areas:

- a study on fatigue testing of welded steel plates;
- an investigation of clear coatings for signs and equipment;
- a method study on potentiometry for chloride determination in aqueous solution;
- an evaluation and approval of vinyl paint systems for the 1980 Skyway Bridge painting contract.

New initiatives begun:

- an investigation of fracture toughness control in structural steels;
- the implementation of safety rules set forth in "The Occupational Health and Safety Act" as related to laboratory equipment and operations in the chemicals section.

Concrete Section

This section headed the task force on durable bridge decks in determining how to best repair existing bridges when necessary. Non-corrosive epoxy-coated reinforcing bars, manufactured in Ontario, are now used in all deck slabs. Ministry and consultant staff inspected and reported on the condition of 163 bridge decks expected to be repaired during the next few years.

Technical reports were published on a low-energy slag cement for concrete, the minimum cement content needed to ensure durable concrete in a salt environment and a new, preformed air entraining admixture. In support of the anticipated concrete pavement program, durability tests were initiated to determine optimum proportions for a lean concrete base.

A full-size bridge column was constructed in central region and tested to determine the variability in strength existing in such heavily stressed structure components.

Staff acted in preparation and presentation of a paper recommending the adoption of a performance-type specification for concrete construction that would place more responsibility on contractors for the quality of work.

Equipment Engineering Office

Staff was responsible for development and monitoring of equipment maintenance and repair policies, plus the financing and maintenance of the head office and central region fleet.

The new equipment section supervised an expenditure of approximately eight million dollars for acquisition of replacement and additional equipment, and processed the acquisition of some \$750,000 of equipment for the development of air fields in Northern Ontario. Equipment specifications were updated with strong emphasis on fuel economy.

In line with this emphasis, personnel prepared a training and instruction program directed to equipment users and operators, promoting fuel saving.

The Pelee Islander ferry, on the Pelee Island crossing, was introduced into service after overhaul following its takeover from the federal government.

And the Casseopeia IV, on the Abitibi River crossing, was repowered.

Labour saving operations — hot paint zone strippers which don't require the use of traffic cones, and berm levellers on graders, to eliminate a second run on the shouldering — were introduced.

Following the successful supply of heavy trucks with diesel engines, diesels were introduced, on an experimental basis, in light pick-up vehicles. The experiment was not as successful as with heavy trucks.

To properly service and maintain diesel engines, mechanic instructors conducted a series of diesel training courses for mechanics throughout the province. And documentation procedures were introduced to simplify transactions with private garages when repairing MTC vehicles.

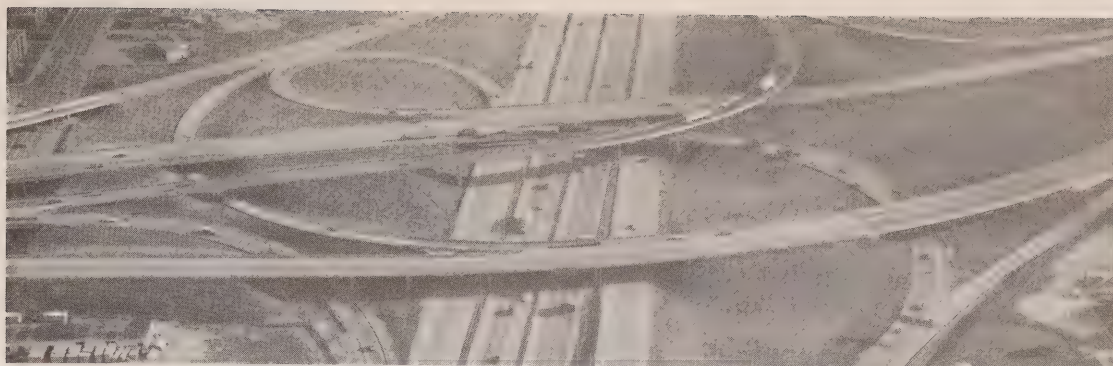
Soils and Aggregates Section

With concern about improving the skid resistance of pavement driving surfaces, work was begun to develop appropriate laboratory tests and in the locating of potential sources for the required type of aggregate.

It was agreed to provide the Ministry of Natural Resources with aggregate evaluation reports for their area studies.

A laboratory testing manual was published, which should help to improve the quality of testing work in the various laboratories throughout the province. And a manual of the new MTC soil classification system was

Continued on next page



Aerial view of Highways 400 and 401

From previous page

prepared and published, the use of which is mandatory in MTC.

An improved method of field compaction control was developed and introduced province-wide by an MTC directive, based on probability testing which recognizes the statistical variability of compacted materials. And a special provision was implemented in some contracts on compaction, using the control-strip technique.

The section actively co-operated in the development of the second phase of the MTC granular base and sub-base quality assurance procedures. Guidelines now include statistical tolerance limits for lot ranges and adjusted pay schedule for slightly out-of-specification materials. Special provisions for the acceptance or rejection of granular "A" has also been developed and will be included in a few selected contracts.

Calibration, maintenance, winter storage and distribution of some 50 nuclear moisture-density gauges were carried out by the nuclear laboratory. A revised "Nuclear Testing Manual" was prepared.

Structural Office

This office completed design and contract documents for 36 bridges in-house and supervised design of 35 by consultants. That represented a drop from the recent peak of 105 in 1978/79. Design to the new Ontario Highway Bridge Design Code was introduced, and by the end of the year virtually all designs were being prepared to this code and in metric units.

Design of the first segmental concrete bridge on the provincial road system, Highway 406 over 12 Mile Creek, was completed in-house. This contract also included the first use by MTC of reinforced earth-retaining walls. Alternative designs in steel and prestressed concrete were completed for two other bridge projects over the Bay of Quinte and the Highway 403 crossing of the Credit River.

In the procedures section, the major task of developing a computer pro-

gram system consistent with the new design code requirements was started. Investigations into the long term application of computer graphics were begun and some pilot tests carried out on a graphics terminal on loan from the federal government.

The building unit was phased out by assigning design work for buildings to consultants and transferring the administrative responsibilities to the highway design office.

Under the approvals section, the number of reviews of final Municipal bridge designs remained the same as the previous year — 208. The number of municipal bridges reviewed for load restriction or by-law approval increased to 367 from 265. And emphasis on bridge evaluation was continued with the number of detailed structural evaluations increasing from 42 to 71. Most were carried out to conform to the new bridge code.

As the number of new bridge designs declined, a bridge rehabilitation task force was set up to report on needs studies, inventory, inspection procedures, funding and priority programming.

A major study on further decentralization of structural program delivery functions was carried out, and recommendations approved. With the regional structural sections strengthened, additional responsibilities were assigned in program administration, bridge rehabilitation and the design of non-complex structures.

Surveys and Plans Office

This office develops policies and procedures for engineering surveys, legal surveys, plan preparation and registration, cartography, photogrammetry and remote sensing.

The 1980-81 edition of the official road map, wall map and final four 1:250,000 maps were completed. The metric conversion of the one inch to four mile map series to 1:250,000 which started in 1974, was completed. Thirty-nine requests for cartographic services from the Ministry and other

government sources were satisfied. Twenty-nine requests for road information compilation were met. Map base film sales (valued at \$2,554) were also completed. The first three maps of the new 1:250,000 map series were begun.

Aerial survey staff delivered 175 photogrammetric engineering plans which break down as follows:

- Medium scale 1:2000 (2m contours);
- In-house: 19,353 hectares (154 models) consultants: 0
- Large scale 1:500 (0.5m contours);
- In-house: 4,253 hectares (336 models), consultants: 1,821 ha (202 models);
- Planimetric 1:500 (no contours);
- In-house: 2,619 hectares (431 models) consultants: 372 ha (56 models).

In addition, 27 km (96 models) of cross-sections were photogrammetrically measured. To complete the above, 1,390 km of photography were required. For 18 non-mapping projects, 2,589 km of photography were flown, along with 31 oblique aerial projects.

The remote sensing section was the principal organizer of a national workshop of engineering applications of remote sensing which developed a series of recommendations. In compliance with the RECAP recommendations, areas for potential remote sensing applications within the Ministry were explored.

The project entitled "The Surveillance and Prediction by Remote Sensing of the Environmental Effects of a New Highway Facility" progressed with the study of several parameters for a test site along Highway 402 entering the "during construction" phase.

Surveys section evaluated an additional 532 horizontal control survey monuments on the Ontario co-ordinate system, and established 402 precise bench marks. During the year, 1,053 plans were examined by this Office. In addition, 187.4 km of highway were designated as controlled access highways, bringing the total mileage of such highways to 6,299.2 km.

Drivers and Vehicles



Transportation Regulation Division

This division is made up of the Licensing and Control and Program Development Branches.

Licensing and Control Branch

The branch consists of the driver licensing and control and vehicle licensing and control offices.

Vehicle Licensing and Control Office

Staff responsibility was the registration and licensing of Ontario's 5.4 million vehicles, maintenance of all vehicle registration records, and the provision of relevant vehicle registration information for the purpose of law enforcement.

Licensing service was provided to the public by 11 Ministry offices and 310 appointed agents.

An automated system handled 3.7 million passenger vehicle and 600,000 trailer registrations. Other records were maintained manually for commercial motor vehicles, buses, motorcycles, mopeds and motorized snow vehicles.

The licensing of public commercial vehicles and public vehicle operations was also administered.

Driver Licensing and Control Office

The day-to-day functions of this office included licensing and post-licensing of drivers, maintenance and administration of the demerit point system, the maintenance of all drivers' records, administration of licence suspensions, reinstatement of driving privileges, and a review of all drivers known to have medical or physical conditions.

1979	
Licensed Drivers	4,858,351
New Drivers	251,477
Male	2,834,439
Female	2,023,912
Demerit Point System	
Warning at 6 to 8 point level	150,395
Interview at 9 to 14 point level	52,212
Suspension at 15 or more point level ...	11,025
Suspensions for 30 days	9,483
Suspensions for 6 months	1,542
Suspensions for physical or medical reasons	1,770
Suspensions for drinking and driving	43,733

Program Development Branch

Personnel were responsible for providing the primary staff to MTC's

drivers and vehicles area in the assessment of transportation regulation of programs and development of new policies and programs.

The branch was comprised of six offices: project development, program planning and evaluation, vehicle standards, safety co-ordination and development, carrier policy and reciprocity, and transportation of dangerous goods.

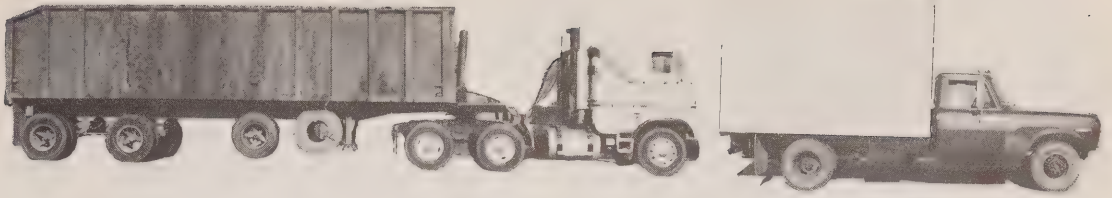
Project Development

This office was an integral part of the Program Development Branch, reacting to requests and demands for new policies and laws in the driver and vehicle administration area. In addition, staff assessed ideas, recommended priorities, developed thoroughly researched positions and guided feasible proposals through the various steps of approval.

Program Planning and Evaluation

Personnel planned and co-ordinated the development of an effective measurement and assessment process for the various elements of the transportation regulation program. Information obtained was provided to senior management for policy decisions and comprehensive program planning.

They supplied appropriate information to the Transportation Regulation Planning Committee, and acted as a focal point in the transportation regulation program for the development and co-ordination of the strategic planning process.



MTC regulates intra-provincial trucking

Regional Operations Division

This division was headed by and Executive Director with four office managers responsible for program administration, investigation and prosecutions, occupational health and safety and highway carrier licensing.

Staff provided enforcement policy, procedures and training for drivers and vehicles field operations and ensured the uniform application and delivery of the driver examination vehicle inspection, highway carrier, and MTC occupational health and safety programs. In addition PCV and PV licenses were issued to the holders of operating authorities emanating from the Ontario Highway Transport Board.

Decentralization of the direction of enforcement of the Highway Traffic Act for Highway Carrier and the Vehicle Inspection programs became effective on July 3, 1979 and Jan. 15, 1980 respectively; Driver Examination in Part III of the Highway Traffic Act was decentralized on Jan. 2, 1980.

While the decentralization of approval and issue of oversized/overweight permits stage I became effective Feb. 13, 1980, the transfer of financial responsibilities (stage II) will not come about until late in 1980. Therefore such matters as prepaid customer accounts, transceiver services, and financial reporting continue to be processed through head office.

Program Administration Office

This office promoted the delivery of uniform drivers and vehicles programs to the public, provided policy directives, operation procedures, technical expertise, and training courses for

driver examination, vehicle inspection and highway carrier field staff.

Program administrators assisted the Transportation Regulation Division during the development of new or amended legislation, and co-ordinated the implementation of drivers and vehicles programs.

Ontario's driver certification program was monitored and audited by driver certification officers working out of this office. The program was expanding to take in trucking companies, fleet operators and colleges of applied arts and technology which carry out driver training programs and sign for driver competence.

Investigations and Prosecutions Office

Investigations and Prosecutions staff monitored compliance of the highway carrier industry and the performance of regional highway carrier activities to ensure standards were met by highway carriers; to control overall operating performances; to ensure uniform application of the Public Commercial Vehicles Act; the Public Vehicles Act and the Motor Vehicle Transport Act (Canada).

Over the past three years, a comprehensive, off-highway enforcement program was developed by conducting in-depth investigations, (authorized by section 15 of the Public Commercial Vehicles Act) which required the examination of all books, records and documents. Last year there was increased activity in the examination of licenced carriers' books to establish if their operations were in compliance with the terms and conditions of their operating licences.

These investigations have become the rule rather than the exception.

Staff also opened communication lines between the provinces of British Columbia, Alberta, Saskatchewan, Manitoba, Quebec and Ontario for the exchange of information relative to such investigations.

Liaison officers representing the Provinces attended a Communication

and Investigational Conference at Edmonton, Alberta, in June 1979. Partially as a result of such exchanges, staff laid 21 charges against unlicensed carriers for contravention of the Motor Vehicle Transport Act (Canada).

As a result of in-depth investigations, 578 cases were placed before the courts for contravention of the PCV, PV and MVT (Canada) Acts. Approximately one-third involved purported leasing arrangements. Subsequent to registered convictions establishing a pattern of illegal operations, the Registrar of motor vehicles exercised power under section 27 of the HTA and issued some 80 notices of cancellation of plates and permits in the past three years.

Vehicle Registration System Project

This project reviewed and analysed the existing vehicle registration system, together with evaluating other existing systems.

Staff mandate is to accommodate the legislative provisions of the new Provincial Offences Act and, at the same time, attempt to significantly increase the accuracy and timeliness of vehicle registration information for public, police, courts and industry interests.

As part of its responsibility, the project successfully expanded the scope of the present, automated registration system to include commercial motor vehicles.

Highway Carrier Licensing Section

This section, recently transferred to the division, was responsible for; (i) the monitoring of Ontario Highway Transport Board certificates for compliance with the PCV and PV Acts and Motor Vehicle Transport Act (Canada); (ii) collection of revenue and issuance

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SAFELY

Continued from page 25

of operating and vehicle licences associated with the board issued certificate of public necessity and convenience.

During the past fiscal year, there were 5,218 certificates processed, 2,864 new and amended PCV and PV operating licences and 63,656 vehicles licences and plates issued.

Occupational Health and Safety Office

The passage of the Occupational Health and Safety Act in October, 1979 placed greater demands on this Ministry office. Therefore, the need for interpretation of the act and regulations and dissemination of health and safety information was a priority.

To this end, staff developed training programs for MTC safety personnel, the major thrust being the training and certification of the safety staff as audiometric technicians. Also, developed were procedures for implementing employee health and safety awareness which was approved by management and the Ontario Public Service Employees Union.

In addition, research into hazards and potential hazards faced by MTC employees resulted in programs involving biological surveillance, environmental controls, personal protective devices, safety education and training.

Vehicle Standards

Staff participated in the development of vehicle-related safety standards, legislation and regulations, and provided engineering expertise internally and externally in matters relating to vehicle design, safety standards and government control.

In addition they investigated accidents in which vehicle condition may have been a contributory factor and recommended appropriate government action.

Carrier Policy and Reciprocity

Staff initiated, developed, revised and co-ordinated major transportation policies affecting the safe, efficient and economic movement of people and freight by the highway carrier industries in Ontario.

Specifically, they co-ordinated the activities of the Ontario Government regarding commercial vehicle reciprocity with other North American jurisdictions; conducted and co-ordinated special studies and negotiations related to government policies and reciprocity arrangements respecting commercial vehicles; defined and participated in related policy and legislative projects conducted by MTC, the Ontario Government and inter-governmental organizations; and provided an information and liaison ser-

vice on matters relating to government policies on the highway carrier industries.

Safety Co-ordination and Development

Staff functioned within the Program Development Branch to ensure continued improvement of the effectiveness and efficiency of Ministry highway safety regulation, providing liaison services for the Co-ordinator of Highway Safety.

In addition, personnel participated with other branch offices in the design and implementation of development projects, providing a liaison service between the division and the R & D Division as well as with outside resources.

Dangerous Goods Transportation

The function of this newly created office was to co-ordinate a provincial strategy on the transportation of dangerous goods.

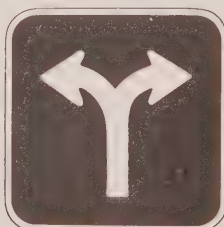
Staff through discussion and negotiation with shippers, carriers, the federal government and other agencies within the provincial government, made recommendations aimed at adoption of a uniform regulation of the transportation of dangerous goods co-ordinated by the federal government.



LEFT OR THRU LANE



RIGHT OR THRU LANE

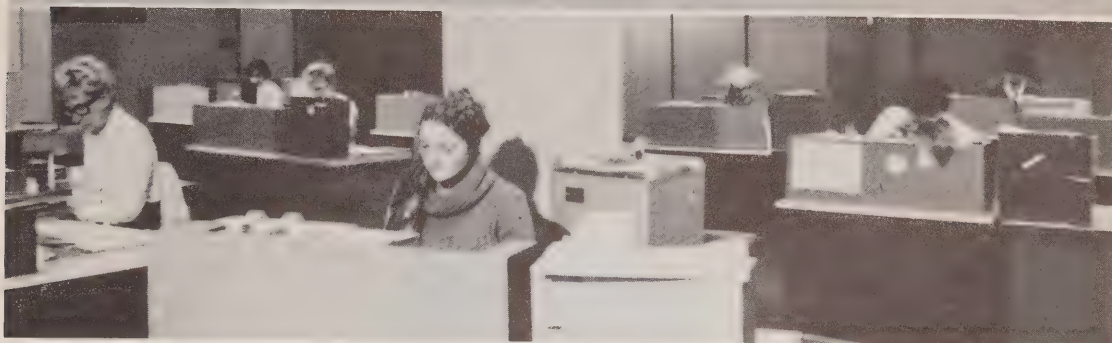


LEFT OR RIGHT TURN LANE



2-WAY LEFT TURN LANE

Finance and Administration



MTC's Downsview computing centre

Services Division

The Services Division consists of three branches: the Computer Systems Branch, the Supply and Services Branch and the Property Branch.

Computer Systems Branch

The branch function has been twofold: to co-ordinate and arrange funding for the Ministry's system activities and advise MTC management on systems planning matters; to provide program managers with expertise in automated and related non-automated systems and the acquisition, development and maintenance of such processing services.

It also acted as a clearing house for all computer program development with systems co-ordinators identifying systems opportunities and advising program managers. Currently there are more than 100 computerized systems supporting various Ministry programs.

Systems Planning Support

This office has been responsible for implementing and monitoring efficient systems development methods in MTC as well as systems to support research and communications. The government's standard systems development methodology, SPECTRUM-

1, was firmly established at the project level. Each systems project was begun with a project proposal sponsored by user management which collectively will form the basis for a Ministry-wide plan.

In communications, computer support was provided to independent telephone companies to aid them in market analysis, plant depreciation analysis and accounting. The Ontario Communications Information System was expanded to include radio and television facilities, and audience characteristics served to facilitate government policy deliberations.

Management Information Systems

This office is responsible for development and support of systems which provide financial, administrative, and operational data to MTC managers and staff. The operations management system, dealing with financial transactions, has been implemented in the 18 district and regional offices as well as head office. All 19 locations are now automatically linked to the central computer data base. Implementation of similar func-

tions to support highway maintenance and vehicle fleet management is scheduled for mid-1980.

Development and implementation of a performance budgeting system for Ministry use was also completed. It supports planning and performance measurement of resource allocations for MTC programs.

Engineering Systems

There are about 50 operational systems, maintained, including structural design, hydrology, road design, transportation planning and traffic studies; support the work process in every facet of highway building and transportation planning.

Major projects completed were:

- Vehicle loading analysis for bridges was modified to conform to the new Ontario Highway Bridge Design Code;
- Highway design data-base was implemented for regional use;
- The Time Series Information System has been designed to link together census, income, drivers and vehicles statistics for use in forecasting travel demand on the provincial highway network.

Regional Liaison and Production Services

Staff is responsible for the provision of comprehensive data conversion, technical control, documentation and administrative support, computer services monitoring, graph plotting, and data communications services to all MTC users as well as municipalities and engineering consultants working on Ministry projects.

In addition, they provide liaison

services for MTC's five regions in the areas of computer needs studies, communications equipment studies, and day-to-day operating needs.

A network of 20 intelligence terminals were installed in Ministry regional and district offices as well as the financial branch at head office. Maintenance and technical support for this network is administered through this office.



Drivers and Vehicles Systems

Both offices are responsible for systems support for Transportation Regulation Division with regard to drivers and vehicles within Ontario.

Within the drivers systems, a probationary drivers program was implemented to place inexperienced drivers under tighter controls. An improved on-line drivers system was introduced, providing more effective data-base update and storage facilities for driver licensing and control. Extended Criminal Code conviction logic and facilities for maintaining hyphenated names were also implemented.

Within the vehicles systems, commercial vehicles are currently incorporated in the automated vehicles system. Commercial vehicles were switched from an annual to perennial plate — with a windshield sticker for renewal purposes. Improvements were also made to the systems for vehicle registration, agents issuing, motor vehicle inspection and commercial vehicle inspection. Staff continued to support law enforcement agencies in the apprehension of drivers for hit-and-run and other offences.

Supply and Services Branch

This branch is responsible for the development and monitoring of Ministry supply and services policies and procedures as well as the delivery of these services throughout head office, the Ministry of Northern Affairs, the Ministry for some, and the government for the purchase and disposal of motor vehicles. These services are provided through the five offices listed below.

Purchasing and Supply Office

Purchasing section staff was responsible for the purchase of all construction and maintenance materials, and general Ministry supplies, totalling approximately \$67 million.

The vehicles and equipment section acted in the purchase of vehicles and equipment through standardization of specifications and consolidated purchasing for all Ontario Government ministries and agencies. Here purchases totalled approximately \$33 million.

The stores section allowed MTC to take advantage of savings by bulk purchasing, also facilitating MTC's operational function by having materials available for later use. It also reconditioned and stored Bailey bridge components for emergency use. Currently, there are 185 such installations in the province.

Field review and disposal office staff facilitated the disposal of all used Ministry equipment, surplus material and all Ontario Government motor vehicles, via public auction or tender. Sales totalled \$2.7 million. Field visits ensured compliance with MTC policies and procedures for purchasing and stores.

Special Services Office

Office staff were responsible for administration of a capital building program involving total major building and space requirements, including office furnishings and equipment at head office and regional and district headquarters. They were also responsible for the provision of accommodation, telecommunications and postal services within MTC, and the administration of service centres on controlled access highways.

In the past year a regional laboratory building was constructed in Kingston and occupancy took place in October of 1979. Working drawings

were started late in the year for a driver examination facility office in Mississauga. Phase I of the Geraldton district airport was completed and working drawings for Phase II initiated.

A major accommodation alteration program to consolidate all head office administration functions at the Downsview complex incorporated the requirement to provide a single window facility for the public visiting the Drivers and Vehicles Division.

A program was initiated to accommodate central region administration offices at 5000 Yonge St. until the new regional complex in Mississauga is constructed.

Major telecommunications projects completed in the past year included installation of a multi-channel VHF/UHF radio system for Kenora district and orders issued for upgrading of the Cochrane district radio system by November of 1980.

With regard to the MTC's northern airstrip program, a non-directional radio beacon was installed at Hornepayne; a standby power system installed at Fort Hope; orders placed for the supply of five non-directional radio beacons for installation at Round Lake, Bearskin Lake and Mehique in 1980, and at Sachigo and Kasabonika by 1981.

Two pilot programs instituted in 1979 for the purpose of providing toll-free public telephone access to the Ministry in the eastern and south-western regions was expanded and accelerated to meet "Access" guidelines. And, the concept of providing public, province-wide toll-free service has now been implemented.

In line with continuing review of the MTC's WATS line and long-distance telephone charges, a combination of INWATS and OUTWATS was installed to serve the Windsor district Drivers and Vehicles office, resulting in a substantial telephone cost saving. INWATS telephone service was also installed for agents issuing section of Drivers and Vehicles at Queen's Park.

Special Services personnel responsibilities included incoming and outgoing mail handling, courier mail service to

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all regional and district offices and Downsview teletype centre activities. The handling of a heavy volume of licence plates, permits, drivers' licences and returned licence plates was also a responsibility.

Volumes of mail reached:

Outgoing mail	2,252,292
Incoming mail	3,545,381
Teletype messages	160,346
Orders processed	66,574
Plate cancellations	517,365

Twenty-three service centres were in operation during the year, 19 on the Macdonald-Cartier Freeway and four on Highway 400. Revenue derived from the locations exceeded \$3,660,000. Facilities and services, available at the centres on a 24-hour basis, included restaurants, washrooms (including handicapped facilities), public telephones, first aid, automotive fuels and lubricants, emergency towing and repair services and 21 picnic rest areas.

Graphic Services

Office staff provided printing and duplicating services, including:

- A wide variety of high quality black and white and color reproduction services using photographic, diazo, screen processing and rapid, turn-around photo copy methods;
- A commercial art and display service for various MTC programs;
- Administration of the MTC and MNA identification card-issuing program;
- Approximately 15 million impressions were produced in the offset reproduction facility;
- More than 22,500 requests for reprographic services were processed;
- And 450 requests for commercial art designs were completed;
- Display unit personnel participated in eight exhibitions.

General Services

Government garage staff were responsible for the maintenance of government-owned sedans operated by senior MPP's and management as well as providing limousine and chauffeur service.

The tenders office promoted and maintained strict security over all tendering procedures, tenders in custody and all confidential matters relating to engineering and supply contracts.

Approximately 11,000 tenders were received and processed for 2,000 contracts while some 2,000 contractors and suppliers attended tender openings.

In advertising, staff placed about 2,000 insertions on behalf of MTC on a province-wide basis, regarding tender-calls on engineering and supply contracts, property and equipment sales.

Direct cash sales of contract documents, the standard specification manual and MTC's contract bulletin produced \$52,000.

Instrument repair technicians tested MTC-owned survey equipment, traffic counters and allied equipment. The new test shop facilities provided testing for components of the #170 microprocessor traffic-signal controller components before distribution to field locations.

The accounting and asset control section was responsible for monitoring and administrative control of MTC's movable asset inventory control program — some 100,000 items.

Record Services

Office staff was responsible for providing assistance to all MTC organizations and the Ministry of Northern Affairs in efficient handling of records and information.

Policy and procedures for record retention and disposal were developed to suit current information requirements, using efficient file classification

systems, microfilm, and centralized storage and protection of vital records. And the disposal of over 11,000 cubic feet of records took place during the year.

Library services staff provided information and library resources for MTC and the transportation community. The library acquired all publications and subscribed to periodicals and newspapers for MTC.

Other services included: reference services, computer searches, inter-library loans, publishing the "Library News", a semi-monthly list of new listings. References exceeded 28,000.

Administrative support section personnel provided office administration, typing and typesetting services for manuals and publications for a number of MTC organizations. Control records for sale and distribution of publications and maps were also maintained while sales were routed through this office, regional and district offices.

Property Branch

Policy and procedures for appraisal techniques, acquisition of property, the rental, management and disposal of surplus lands, and the quasi-legal aspects of the purchase of real estate in the title-searching and conveyancing functions were developed in this office.

Staff in five regional offices negotiated 1,200 amicable property settlements. The Ministry expropriated 334 properties to obtain title for land required to permit contracts to proceed.

MTC expended \$13,579,690 in payment while acquiring title to lands required for highway projects. An additional \$1,350,065 was paid to owners affected by expressways, subject to cost-sharing agreements between the Ministry and municipalities involved.

Revenue of \$10,502,069 from the sale of surplus lands and \$647,992 from leasing properties was received.



Internal Audit Branch

This branch was responsible for MTC's audit activities and was appointed auditors of record for the Ministry of Northern Affairs. Under the general direction of the Deputy Minister, staff was segregated into the following three areas of responsibility to accommodate this function:

Operational Audit Office:

Personnel was engaged in the expenditure, revenue and operational review of the Ministry's 18 district offices, five regional offices and head office administrative units, as well as some 300 private licence-issuing agents throughout Ontario.

Staff also performed audits in municipalities, dealing with MTC subsidized road and transit expenditures. This function extended to cover Toronto Area Transit Operating Authority and the Ontario Highway Transport Board, as well as specific programs concerning expressways and connecting links. During the fiscal year, audit procedures were carried out on behalf of MNA and its agency, the Ontario Northland Transportation Commission.

Engineering Audit Office:

The engineering audit office audited all phases of the Ministry's capital and subsidized construction programs, as well as providing engineering expertise to other Ministry branches.

In 1979-80, some 565 final audits, as well as interim audits, were performed to ensure proper payment for construction projects. In addition, a number of weigh, work project and field audits were also completed on

capital and subsidized contracts.

Claim and design audits were performed on 60 contracts, while 30 negotiation reviews were completed. In conclusion, 300 special assignments were performed to round out all activities.

Project and EDP Audit Office

Audits in accordance with special agreements between MTC, crown corporations and private enterprises were performed, involving items of complex and contentious nature. Force accounts, claims and negotiations audits were completed — mostly on a request basis involving contractors' records.

And, audits of the operations management system, the vehicle registration system and computer security were carried out. Principle objectives were to ensure effective and efficient use of computers by Ministry staff.

Office of Legal Services

This office is a law office within the Ministry, providing legal services to the Minister and MTC staff. The legal officers are members of the Ministry of the Attorney General's staff seconded to MTC and located at head office and in each of the regions.

Staff provided legal advice on all aspects of the Ministry's programs and prepared the legal documentation through which such programs were carried out. The office advised on legislation affecting the Ministry and prepared and recommended amendments to the statutes the Ministry administered.

Legal office counsel provided Ministry representation before the many administrative boards and tribunals with which the Ministry came into contact and conducted prosecutions for offences under the Ministry's statutes.

Claims Section

The Claims Section (formerly the Insurance and Claims Office) is charged with the responsibility of dealing with a large volume of claims filed by the public against the Ministry, as well as claims by the Crown against third parties.

Investigation of such claims involved obtaining detailed reports and information from various sources such as the Ministry's regional and/or district authorities, from police, independent witnesses, etc. Personnel conducted field inspections wherever necessary.

Section staff are responsible for dealing with accident claims for all Ontario government vehicles (excluding those of the Provincial Police) as well as claims by third parties against the Crown.

The section institutes claims against the public for damage to Crown property such as bridges, light standards, guide rails, signs, etc. It also arranges for legal action to be taken against responsible parties through the Ministry of the Attorney General.

In all, over 11,500 claims were handled during the fiscal year 1979-80.

Financial Branch

The Financial Branch recorded, monitored and controlled Ministry expenditures and revenues. It provided advisory assistance to management on financial matters and acted as the liaison between MTC and central agencies, other arms of government and the public in the area of finance and accounting.

Staff were also responsible for pre-qualification of contractors bidding on Ministry contracts as well as contracts for several of the large urban municipalities.

They also maintained a substantial statistical recording unit for the provision of statistical information concern-

Continued on next page



From previous page

ing projects affecting the Ministry in quantities, dollar volume units and prices, indices, and geographic locations. In addition they provided head office accounting for all MTC branches.

Over the past two years, the Ministry installed computer terminals in its district and regional offices and head office, Downsview, initially to upgrade the reporting system.

Financial Management Services

Financial Management Services provided senior and line managers with the technical tools and information to improve the financial management process. The group consists of three offices: financial analysis and assessment, forecasting, and budgetary review.

The first provided assistance to Ministry personnel in carrying out appropriate financial analysis on a wide range of projects.

—As a study or project participant, providing financial assistance as required;

—As a consultant to study and project groups involved in performing financial analysis;

—Provided education material on the effective use of financial analysis methods;

—Monitored the evaluation of alternatives submitted to ministry program planning committees for appropriate financial analysis.

The role of the second office was two-fold:

—Providing financial forecasting required to formulate multi-year and annual plans necessary for the fulfillment of MTC's internal strategic and operational plans;

—The formulation of a multi-year plan, fulfilling both the Government's long term objectives and the annual expenditure allocation process.

In 1979/80 a five-year planning period was adopted based on the results of the strategic planning guidelines. The resulting plan was endorsed

by the Minister and Cabinet Committee on Resources Development (CCRD) and used to develop expenditure targets during the allocation of estimates for the succeeding year's budget.

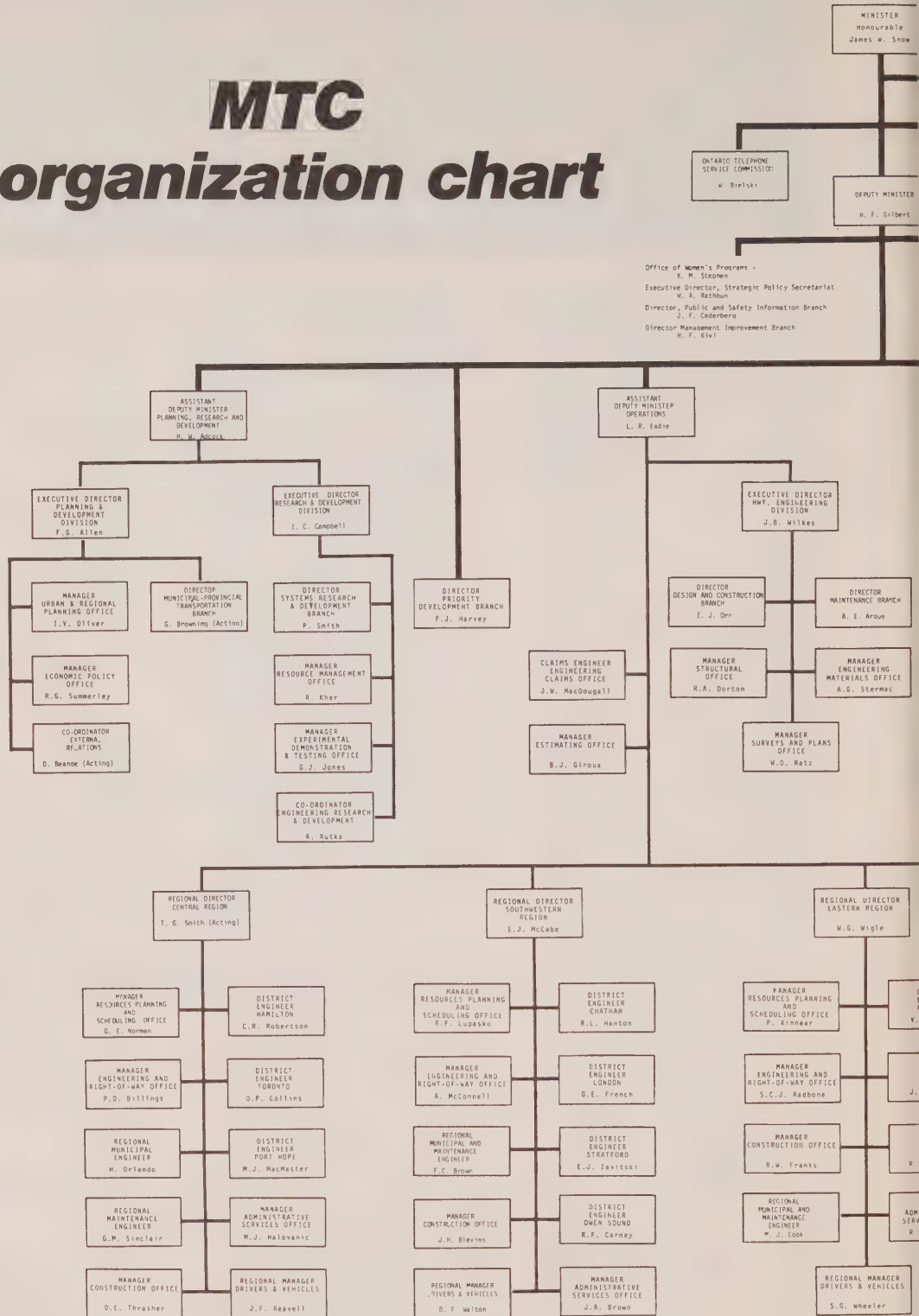
Cabinet Committee on Resources Development (CCRD) and used to develop expenditure targets during the allocation of estimates for the succeeding year's budget.

Third, office staff addressed the need for performance planning and assessment focused on effective and efficient utilization of Ministry resources; it was involved in the development of systems and techniques for performance assessment and the assistance of line managers. In addition, office personnel were responsible for carrying out performance assessment on behalf of corporate level management.

The use of Management-By-Results (MBR) contracts was continued for all activities, forming part of the 1980/81 estimates. Staff was also responsible for the co-ordination of the MBR process and the necessary reporting to the Management Board of Cabinet. In addition, a study was completed to identify the needs and concerns of line managers regarding the MBR process.

MTC

organization chart



Ministry of
Transportation and
Communications

Ontario



CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1978	1979
6	Fail to register a vehicle	4,044	4,110
7(1)	False statement	123	113
7(2)	Fail to notify new address	3,019	2,862
8	Fail to have number plates	20,703	19,678
9	Violation as to number plates	6,628	6,518
10	Improper use of number plates	1,493	1,194
13	Fail to have operator's licence	17,212	23,585
14	Fail to produce operator's licence	25,006	27,927
16	Fail to have chauffeur's licence	25	7
17	Fail to produce chauffeur's licence	126	23
18	Operation of motor vehicle by person under 16	179	195
27(2)	Unlawful possession of permit	36	32
27(3)	Unlawful possession of licence	207	245
30(b)	Driving while licence is suspended H.T.A.	241	171
35	No garage licence	19	12
36	Record of wrecked vehicle violation	62	28
37	Improper lights	13,004	12,556
39	Defective brakes	1,713	1,760
41	Faulty equipment (mirror, windshield, etc.)	817	702
47	Driver's view obstructed	183	145
48	Windows obstructed	1,695	1,514
49	Excessive noise /smoke/fumes	27,731	26,408
50	No slow-moving-vehicle sign	77	58
52A(2)	Radar warning device prohibited	500	316
53	Fail to have proper trailer attachments	798	782
55(3)	Failing to submit to vehicle inspection (Unsafe vehicle)	2,251	2,222
57	Drive unsafe vehicle	5,516	5,065
58	Certificate of mechanical fitness violation	21	36
61	No name of owner on commercial vehicle	1,679	1,859
62	Drive/ride motorcycle no safety helmet	1,899	1,995
63A(2)	Remove/modify/inoperative seat belt assembly	1,525	1,237
63A(3)	Failure/improper use seat belt assembly—driver	84,317	63,333
63A(4)	Passenger—failure to ensure seat belt use	11,164	1,073
63A(6)	Driver—failure to ensure passenger seat belt use	700	555
65(6)	Special permit violation	810	2,868
66(1)	Overload in excess of permit	345	70
66(2)	Fail to produce commercial ownership permit	1,151	390
66(4)	Spring Regulations—Overload	8	46
68	Overhanging load	1,254	461
70	Excessive width or length of vehicle	295	115
72	Maximum allowable axle unit weights	9,080	11,747
73	Maximum allowable axle group weights	372	216
74	Maximum allowable gross vehicle weights	1,029	2,374
77	Operating within permitted weights	2,368	4,059
82	Speeding 30 mph or more over limit	105	0
	Speeding more than 19 less than 30 mph	370	1
	Speeding more than 10 less than 20 mph	664	8
	Speeding under 11 miles per hour	9,683	8
	*Speeding 50 km/h or more over the limit	12,515	13,152
	*Speeding more than 29 less than 50 km/h	88,445	94,202
	*Speeding more than 15 less than 30 km/h	282,021	291,931
	*Speeding under 16 km per hour	402,874	392,506
83	Careless driving	18,499	20,531
85	Unnecessary slow driving	186	189
86	Fail to obey signal of police officer	324	2,844
87	Fail to yield right of way	202	200

*Km/h effective September 6, 1977

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1978	1979
88	Fail to stop at through highway	55,162	55,993
90	Fail to obey yield sign	797	739
91	Fail to yield—from private road	7,823	7,495
92	Pedestrian crossover violation by driver	5,853	5,926
93(1)	Improper right turn at intersection	4,094	3,609
93(2)	Improper left turn at intersection	5,707	6,034
93(3)	Improper left turn into intersecting highway	5,478	5,474
93(4)	Improper left turn from one-way highway	2,346	1,895
93(5)	Improper left turn into one-way highway	565	412
93(6)	Improper left turn from one-way highway to one-way highway	835	924
94(1)	Fail to signal for turn	14,191	15,136
94(2)	Fail to signal-moving from parked position	3,567	3,696
94(4A)	Improper manual signal	3	0
94(5)	Improper directional signal	197	59
94(6)	Improper use of signaling device	69	82
94(7) (7B) (7A)	Fail to signal	164	169
95	Prohibited U-turns	644	618
96(5)	Disobey red signal light	51,838	40,146
96(6)	Disobey an amber	13,541	12,885
96(7) (8) (9)	Flashing red-amber-green arrow	1,615	3,879
96(10)	Fail to give right-of-way to pedestrian	986	1,078
96(11)	Prohibited turn	32,034	26,751
96(19)	Disobey traffic signal	2	0
96A(3)	Disobey portable lane control signal—red light	—	380
96A(4)	Disobey portable lane control signal—amber light	—	117
97	Drive right side of multi-lane highway	296	271
98(1) (2)	Fail to share the road	2,805	2,873
98(3)	Fail to move to right	176	170
98(4)	Vehicle or horsemen overtaking others	460	485
98(5)	Horsemen or vehicles overtaking bicycles or tricycles	27	27
98(6)	Improper passing	17	21
98(7) (a) (b)	Improper passing	1,340	1,430
99	Drive left of centre of highway	1,920	1,901
100(1)	Passing to right of vehicle	3,722	53
100(2)	Unsafe passing to the right	103	3,771
102	Wrong way on a one-way street	7,278	7,398
103(a)	Unsafe lane change	6,425	6,623
103(b)	Drive in centre lane of three lane highway	101	214
103(c)	Fail to drive in slow moving traffic lane	2,023	3,393
104(a) (b)	Improper driving on divided highway	1,254	1,156
105 105(1)	Following too closely	17,343	17,722
105(2)	Following too close in commercial vehicle	233	324
106(1)	Fail to yield to fire department vehicle, etc.	403	397
106(2)	Following a fire department vehicle	26	30
109	Crowding driver	509	490
110	Fail to stop for crossing (signal)	210	208
111	Drive through, under or around railway barrier	205	181
112	Improper opening of vehicle door	466	429
113(1)	Improper approach or passing a stopped streetcar	176	164
113(2)	Pass streetcar on left side	55	52
114	Improper driving when approaching horses	2	0
115	Fail to use passing beam	1,357	1,174
116	Improper parking on highway	1,226	495
116(8)	No warning lights on commercial vehicle	12	24
116(9)	No flares	34	27
116(10)	Vehicle interfering with traffic	995	891
117	Racing	188	161
119(b)	Failure to stop school bus or public vehicle at railway crossing	6	9
120(2)	Fail to stop for school bus	3,426	2,577
120(3)	School bus: Fail to actuate lights	29	30
120(4)	Unlawful use of red signal lights on school bus	—	7
120(5)	School bus: Failure to cover signals and signs	8	14
120A(3)	Fail to obey school crossing stop sign	—	85

CONVICTIONS REGISTERED UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCES	1978	1979
124	Littering highway	1,553	1,713
125(2)	Fail to obey a direction sign	3,612	4,144
139	Fail to report an accident	2,881	3,101
140	Fail to remain at the scene of an accident	3,089	3,476
141	Fail to report damage to highway property	664	739
	Other offences	13,340	26,659
	TOTAL	1,354,829	1,335,056

SUMMARY OF CONVICTIONS

Criminal Code	57,070	60,396
Highway Traffic Act	1,341,980	1,316,460
Regulation H.T.A.	12,180	12,780
Municipal bylaws	33,334	34,876
Motor Vehicle Accident Claims Act	14,745	13,666
Public Commercial Vehicles Act	859	2,295
TOTAL	1,460,168	1,440,473

REGULATIONS UNDER THE HIGHWAY TRAFFIC ACT

SECTION	OFFENCE	1978	1979
702(1)	School bus violation	305	4
418(13) (14) (15)	Number plate violation	623	1,108
418(24) (1)	Instruction permit violations	608	318
418(25) (2)	Drive motorcycle, no endorsed licence	937	389
148(27)	Restricted licence violation	327	125
418(28)	Fail to notify name/address change	2,089	720
418(29) (1)			
a b c d e	Driver licence violation	68	4
418(32) (1)	Only single beam headlight	142	85
418(39)	Seat belt violation	3	0
418(40) (1) (2) (3)	Motorcycle violation	138	126
421(4)	Improper parking	66	236
433(14)	Prohibited use of studded tires	230	130
906(2)	Classified licence violation	935	4,056
	Others	5,664	5,474
	TOTAL	12,180	12,780

CONVICTIONS REGISTERED UNDER THE CRIMINAL CODE (CANADA)

SECTION	OFFENCE	1978	1979
203	Criminal negligence causing death	10	15
204	Criminal negligence causing bodily harm	4	6
233(1)	Criminal negligence	108	138
233(3)	Fail to remain	2,123	2,277
233(4)	Dangerous driving	1,762	1,957
234	Drive ability impaired	21,659	21,424
235(2)	Fail to take breathalyzer	3,078	3,314
236	Over .08 alcohol	18,160	19,862
238(3)	Drive while disqualified	10,166	11,403
	Others	0	0
	TOTAL	57,070	60,396

CONVICTIONS REGISTERED UNDER THE MOTORIZED SNOW VEHICLES ACT

SECTION	OFFENCE	1978	1979
2(1)	Drive or permit to drive unregistered vehicle	352	263
2(2)	Fail to register	7	6
2(3)	Fail to provide evidence of issue of permit (no plate)	73	14
2(7)	Fail to display registration number	302	163
2(8)	Fail to display evidence of permit	570	358
3(1)	Make false statement	3	2
3(2)	Fail to notify change of address	0	1
3(3)	Fail to notify change of ownership	29	15
4	(Plate)—Registration number obstructed	0	0
4(2) A & B	Use defaced or altered plates	0	0
4(2) C	Improper plates	0	0
5	Drive on prohibited highway	152	109
6(2)	Drive in area not designated	0	0
7	Improper crossing of roadway	11	3
7(1)	Person under age 16 drive on highway	3	0
7(2)	Permit person under age 16 to drive on highway	8	2
7(3)	No driver's licence	28	7
7(5)	Permit unlicensed person to drive	4	1
8(1)	No operator's licence	205	139
8(2)	Drive across highway no licence	20	11
11(1)	Operate (or permit operation) uninsured vehicle	323	248
11(2)	No insurance	7	16
11(3)	Fail to produce evidence of insurance	147	47
11(4)	Produce false evidence of insurance	0	1
12(1)	Fail to report collision	20	18
12(2)	Police officer fail to forward report of accident	0	0
13(1)	Speeding	41	21
13A	Careless driving	54	42
14(1)	Fail to produce licence	45	41
15(1)	Improper muffler	3	2
16	Towing on serviced roadway prohibited	6	2
17	No helmet	299	240
22	Trespassing (no written permission)	15	12
24(3)	Disobey signs on highway or public trail	16	11
	Others	63	35
	TOTAL	2,806	1,830

REGULATIONS (MOTORIZED SNOW VEHICLES ACT)

SECTION	OFFENCE	1978	1979
2	Disobey police officer	6	1
3	Fail to yield to vehicle on right	4	2
4	Disobey sign	14	14
5(1) (b)	Fail to yield—from adjoining property	6	0
5(2)	Improper crossing of roadway	0	0
6(3)	Improper left turn	3	0
7(1)	Fail to signal	0	2
7(2)	Fail to signal from stopped position	0	0
7(3)	Improper signal	0	0
7(4)	Fail to signal stop	0	0
8(a)	U-Turn—no clear view	0	0
8(b)	U-Turn—railway crossing	0	0
8(c)	U-Turn—on hill—no clear view	0	0
9	Disobey traffic signal light	0	1
10(1)	Fail to share roadway	3	1
10(2) (b)	Passing when roadway not clear	0	0
11	Drive on left of centre	0	2
12	Pass on right—not in safety	0	0

SECTION	OFFENCE	1978	1979
13	Following too closely	3	0
14(1)	Fail to stop at railway crossing	0	0
14(2)	Cross railway improperly	0	0
15(1)(a)	Park on roadway	0	0
16	Speeding	0	0
17	Careless driving	1	1
19(a)	Drive on Kings Highway (prohibited)	0	0
20	Improper lights	0	0
21	Improper or no lights	23	3
	Others	3	6
	TOTAL	66	33

CRIMINAL CODE OF CANADA (MOTORIZED SNOW VEHICLES)

SECTION	OFFENCE	1978	1979
233(2)	Fail to remain	0	0
233(4)	Dangerous driving	0	0
234	Impaired driving	13	12
235(2)	Fail to take breathalyzer	4	0
236	Over .08 alcohol	6	0
238(3)	Drive while disqualified	5	0
	TOTAL	28	12

MUNICIPAL BYLAWS (MOTORIZED SNOW VEHICLES)

55

25

SUMMARY OF CONVICTIONS (MOTORIZED SNOW VEHICLES)

Motorized Snow Vehicles Act	2,806	1,830
Criminal Code of Canada	28	12
Regulations	66	33
Bylaws	55	25
TOTAL	2,955	1,900

SUSPENSIONS

1978

1979

COURT ORDERED SUSPENSIONS H.T.A.

Careless driving	883	935
Speeding over 30 mph	69	217
Racing	25	30
Fail to remain	212	245
Drive while licence suspended (H.T.A. Section 30b)	29	9
Others	53	65
TOTAL	1,271	1,501

DEMERIT POINT SYSTEM SUSPENSIONS

15 demerit point accumulation	10,246	11,025
Fail to attend interview	1,935	2,220
As a result of interview	272	511
TOTAL	12,453	13,756

DISCRETIONARY SUSPENSIONS (H.T.A.—SECTION 27)

Medical or physical condition	2,087	1,770
Operating record	2,026	601
TOTAL	4,113	2,371

SUSPENSIONS	1978	1979
SUSPENSION FOR:		
Motor Vehicle Accident Claim	6,194	6,192
Failure to pay Judgment	1,270	1,248
Default in payment of traffic fine	50,257	60,412
	57,721	67,852

MANDATORY SUSPENSION H.T.A.

Criminal Negligence	121	158
Dangerous driving	1,754	1,913
Impaired	21,430	20,957
Fail to provide breath sample	3,076	3,222
Blood/Alcohol .08	17,839	19,448
Fail to remain at scene	2,101	2,249
Drive while Disqualified	10,164	11,293
Fail to provide (RDSI)	63	106
	56,548	59,346

TOTAL SUSPENSIONS	132,106	144,826
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DRIVER DEMERIT SYSTEM

	1978	1979
6 POINT LEVEL Advisory letters issued	147,332	105,395
9 POINT LEVEL Interview conducted	51,914	52,212

SUSPENSION

Drivers who reached suspension level through point accumulation	10,246	11,025
Drivers suspended for failure to attend interview	1,935	2,220
Drivers suspended as a result of interview*	272	511
Total suspensions under point system	12,453	13,756

*Because of unfavourable records and/or attitudes

LICENCE CANCELLATION

Licences cancelled due to unsatisfactory driver re-examination at time of point system interview	13	14
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DRIVER MEDICAL REVIEW

	1978	1979
Total Cases Reviewed	135,289	40,319
Satisfactory Reports	131,861	38,960
Unsatisfactory Reports	3,248	1,359

DRIVER OPTOMETRICAL REVIEW HIGHWAY TRAFFIC ACT (SECTION 144)

Total Cases Reviewed	3,513	3,015
Satisfactory vision reports filed	820	1,044
Drivers required to wear prescribed lenses while driving—no previous restriction	2,630	1,773
Unsatisfactory vision reports	63	198

DRIVER CONTROL STATISTICS—1979 SUMMARY SHEET

	1977	1978	1979
NUMBER OF LICENSED DRIVERS IN ONTARIO	4,512,327	4,714,121	4,858,351
CONVICTIONS RECORDED IN RESPECT TO THE OPERATION OF:			
Motor Vehicles	1,371,104	1,460,168	1,440,473
Motorized Snow Vehicles	2,481	2,955	1,900
TOTAL	1,373,585	1,463,123	1,442,373
TOTAL DRIVER LICENCE SUSPENSIONS APPLIED	124,183	132,106	144,826
MEDICAL AND OPTOMETRICAL REVIEWS CONDUCTED	169,884	138,802	43,334

TRENDS IN MOTOR VEHICLE ACCIDENTS

Death and Injury Rates Over the Period 1978-1979

Between 1970 and the end of 1979, Ontario's population and the number of licensed drivers, motor vehicle registrations and motor vehicle accidents (with exception of the years 1976 and 1978) were all on the rise. During the past 10 years, traffic deaths reached a high of 1,959 in 1973 and declined to a low of 1,420 deaths in 1977.

In the past year, the number of deaths increased 7.6 percent from 1,450 deaths in 1978 to 1,560 in 1979. The population grew from 8.44 million to 8.55 million. The death rate per 100,000 population increased slightly to 18.3 from 17.2 last year.

The death rate over the past four years, ranged from 17.0 to 18.3 and was the lowest per 100,000 population since 1946 at which time the population was 4.09 million and the fatality rate was 16.8.

There was an increase of 6,342 persons injured during 1979, from 95,664 to 101,321. The 1979 injury rate per 100,000 population increased to 1,185.6 from 1978 when it was 1,124.8.

Last year, the number of motor vehicle accidents reported totalled 197,196 an increase of 5.8 percent against the 1978 total of 186,363. There were increases of 4.2 percent in

fatal accidents and 7.6 percent in the number of persons killed. Personal injury accidents and persons injured also increased 7.2 percent and 6.7 percent, respectively.

The motor vehicle accident rate per one million kilometres travelled remained the same as last year at 2.7 and fatal accident rate and death rate per 100 million kilometres travelled also remained the same, i.e., 2.1, which is the second lowest since 1955.

The number of kilometres driven in 1979 was estimated at 73,271,038,000 an increase of 5.7 percent over the 1978 figure of 69,316,667,000.

Ministry Expenditure by Highway

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
2	Lancaster—Windsor	\$ 4,280,999	\$ 2,951,587
3	Fort Erie—Windsor	8,478,930	2,038,199
4	Port Stanley—(Creemore)	21,015	1,128,694
5	Toronto—Paris	4,330,410	598,861
6	Hwy. 24—Tobermory	913,277	1,966,170
7	Ottawa—Sarnia	4,718,189	3,578,339
7A	Hwy. 115—Hwy. 12 (Manchester)	—	197,042
7B	Peterborough—Chemung Corners	101,931	56,378
8	Winona—Goderich	75,249	668,776
9	Hwy. 11—Kincardine	12,833	895,282
10	Port Credit—Owen Sound	976,937	890,569
11	Toronto—Rainy River	31,978,065	7,957,231
11B	At New Liskeard	929,076	61,938
12	Whitby—Midland (7)	4,518,393	688,723
14	Bloomfield—Marmora	144,013	220,194
15	Kingston—Carleton Place	107,088	457,630
16	Johnstown—Ottawa	40,281	337,324
17	Quebec Boundary—Manitoba Boundary	30,848,941	7,471,998
17B	At North Bay	209,608	4,027
18	Leamington—Windsor	762,187	363,276
19	Port Burwell—Tralee	22,500	441,641
20	Niagara Falls—Hamilton	2,661	393,538
21	Hwy. 3 (Morpeth)—Owen Sound	2,359,508	1,211,290
22	London—Hwy. 7	—	167,356
23	Hwy. 7—Hwy. 9 Teviotdale	4,183	468,499
24	Hwy. 59—Collingwood	22,093	852,446
24A	Paris—Galt	—	35,232
25	Oakville—Hwy. 89	3,517	482,716
26	Barrie—Owen Sound	10,051	474,416
27	Toronto—Penetanguishene	387,880	775,056
28	Port Hope—Bancroft	1,576,029	484,772
29	Brockville—Arnprior (15)	581,527	327,172
30	Brighton—Havelock	68,012	170,058
31	Morrisburg—Ottawa	1,498,739	318,560
32	Gananoque—Hwy. 15	1,541,694	58,088
33	Kingston—Stirling	71,524	410,391
34	Hwy. 2 (Lancaster)—Hawkesbury	61,095	261,817
35	Hwy. 401 (Newcastle)—Dwight	318,944	713,599
35A	Fenelon Falls—Hwy. 35	—	11,577
36	Burleigh Falls—(Hwy. 7)	699,031	252,744
37	Belleville—Hwy. 7 (Actinolite)	63,268	138,775
38	Kingston—Hwy. 7 (N. of Sharbot Lake)	20,783	232,390
40	Blenheim—Sarnia	1,800,435	610,742
40A	Sarnia By-pass	—	1,845
40B	At Sarnia	—	1,683
41	Napanee—Pembroke	912,939	746,148
42	Brockville—Westport (29)	65,246	166,134
43	Alexandria—Perth	604,545	602,781
44	Hwy. 17—Hwy. 29 (Almonte)	8,035	84,400
45	Cobourg—Norwood	11,079	190,018
46	Hwy. 7 (E. of Manilla)—Bolsover	—	90,618
47	Hwy. 48 (N. of Hwy. 7)—E. of Hwy. 12	9,290	312,891
48	Toronto—Hwy. 35 (Coboconk)	52,182	578,647

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
49	Picton—Hwy. 401 (W. of Desoronto)	\$ —	\$ 72,451
50	Toronto—Hwy. 89	100,503	294,907
51	Rondeau Prov. Park—Jct. Hwy. 3	—	23,945
52	N. of Hwy. 97S—Hwy. 2	3,331	142,559
53	Hamilton—Hwy. 2 (Eastwood)	71,955	241,438
54	Cayuga—Cainsville	15,479	349,379
55	Hwy. 401—Niagara	—	81,624
56	Jct. Hwy. 3—Jct. Hwys. 53 & 20	1,580	95,959
58	Port Colborne—St. Catharines	420,250	242,908
58A	Port Colborne (Hwy. 58 to Jct. Hwy 140)	—	7,329
59	Long Point—Shakespeare	1,270	465,359
60	Hwy. 17 (W. of Renfrew)—Huntsville	64,486	922,819
61	International Bdry.—Thunder Bay	130,000	220,615
62	Hwy. 14 (N. of Belleville)—Pembroke	713,434	883,781
63	North Bay—Quebec Border	775,036	204,383
64	Sturgeon Falls—Hwy. 11	56,642	500,356
65	Quebec Border—Matachewan	594,570	429,531
66	Quebec Border—Hwy. 65	81,331	361,667
67	Iroquois Falls—Hwy. 101	11,754	120,686
68	Hwy. 17 (Espanola)—S. Baymouth	749	494,690
69	Hwy. 12 (N. of Brechin)—Capreol	3,847,953	1,444,770
70	Springmount—Hepworth	1,143	61,104
71	Fort Frances—Hwy. 17 (E. of Kenora)	15,670	372,129
72	Hwy. 17 (Dinorwic)—Sioux Lookout	2,579,130	262,645
73	Port Bruce—Dorchester	4,277	149,034
74	Hwy. 3 (New Sarum)—Nilestown	—	83,434
76	Hwy. 3 (Eagle)—Hwy. 2	—	70,644
77	Leamington—Hwy. 401 (N. of Comber)	2,128,634	92,210
78	Hwy. 21 (Dresdan)—Wallaceburg	905,537	52,562
79	Hwy. 2 (Bothwell)—Hwy. 7	1,422,128	150,228
80	Hwy. 2 (S. of Glencoe)—Courtright	1,036,428	238,578
81	Delaware—Grand Bend	43,769	264,447
82	Hwy. 7 Jct.—Hwy. 21	—	46,404
83	Hwy. 23 (Russeldale)—Hwy. 21	5,896	172,921
84	Hensall—St. Joseph	28,253	72,451
85	Kitchener—Elmira	555,234	116,625
86	Guelph—Amberly	2,913	470,898
87	Harriston—Hwy. 86 (Bluevale)	678,176	141,364
88	Bradford—Hwy. 27 (Bond Head)	4,771	40,301
89	Hwy. 11—Hwy. 23 (E. of Palmerston)	212,437	509,687
90	Barrie—Angus	1,161,068	96,791
91	Stayner—Duntroon	357	33,182
92	Elmvale—Wasaga Beach	1,143	64,697
93	Hwy. 11 (E. of Barrie)—Waverley	1,200	156,912
94	Callander—Hwy. 17 (S. of North Bay)	—	36,765
95	Alexandria Point—Wolfe Island	81,994	36,385
96	Port Metcalf—W. End of Wolfe Island	99,508	112,028
97	Hwy. 6 (Freelton)—Hickson	—	103,491
99	Dundas—Hwy. 24 (N. of Brantford)	253,289	177,444
100	Jct. Hwy. 401 to London	11,061	40,194
101	Quebec Border—Hwy. 17 (Wawa)	871,087	1,574,113
102	Thunder Bay—Sistonens Corners	332,014	111,347

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
105	Hwy. 17—Red Lake	\$ 28,691	\$ 422,946
106	Hwy. 28 (Dale)—Hwy. 2 (Welcome)	—	15,169
108	Hwy. 17—Hwy. 639 (Quirke Lake)	249	162,280
112	Hwy. 11—Hwy. 66 (Swastika)	—	88,671
115	Newcastle—Peterborough	42,603	199,998
117	Jct. Hwy. 11—Jct. 35	39,496	210,658
118	Hwy. 11—Hwy. 169	495,005	115,795
121	Hwy. 28—Hwy. 35 (S. of Fenelon Falls)	74,630	502,185
124	Sundridge—Parry Sound	18,018	283,941
125	Hwy. 105—Red Lake	—	31,640
126	Hwy. 401—Hwy. 2 (London)	11,285	43,849
127	Maynooth—Hwy. 60 (E. of Whitney)	—	137,346
129	Thessalon—Chapleau	382,680	820,670
130	Port Arthur—Hwy. 61	21,414	38,863
131	Jct. Hwy. 11 & 17 to Memorial Ave.	14,457	—
132	Renfrew—Hwy. 41	289	98,240
133	Hwy. 33 (Millhaven)—Hwy. 401	—	33,293
134	Jct. Hwy. 7—Jct. Hwy. 28 (Lakefield)	2,714	54,291
135	Hwy. 401—Hwy. 2 (London)	14,499	23,143
136	Hwy. 24—Orangeville	—	75,275
137	Hwy. 401—Thousand Island Bridge	—	20,427
138	Cornwall—Monkland	—	148,832
140	Hwy. 3 (Port Colborne)—Hwy. 20	18,041	100,956
141	Hayes Corners Hwy. 69—Jct. Hwy. 11	11,445	178,849
144	Sudbury—Hwy. 101	1,438,921	1,106,842
169	Jct. Hwy. 12 to Jct. Hwy. 69	13,563	192,204
400	Toronto—Hwy. 12 (Coldwater)	11,528,285	2,127,636
401	(MCF) Quebec Border—Windsor	27,900,285	11,060,517
402	Hwy. 7—Blue Water	19,774,987	358,165
403	Burlington—Brantford	17,115,807	751,159
404	Toronto—Hwys. 7 & 12	3,571,423	174,855
405	QEW—International Bridge (Queenstown)	—	111,724
406	Hwys. 20—58—QEW	3,751,581	180,819
407	Jct. Hwy. 401 to Jct. Hwys. 35 & 115	4,346	—
409	Belfield Expressway Hwy. 401—International Airport	114,602	323,357
410	Hwy. 401—Jct. Hwy. 7 & 10	119,072	152,480
416	Jct. Hwy. 2—Johnstown to Ottawa	2,869	—
417	Quebec Boundary—Ottawa	1,977,526	1,633,944
420	QEW—Rainbow Bridge (Niagara Falls)	1,001,551	63,935
427	QEW—Hwy. 401	6,197,164	704,702
451	(QEW) Toronto—Fort Erie	8,608,951	5,129,596
458	Ottawa Queensway	1,040,368	—
	TOTAL KING'S HIGHWAYS	230,860,469	85,991,701

SECONDARY HIGHWAYS

500	Hwy. 41 (Denbigh)—Bancroft	6,776	211,395
503	Tory Hill—Kirkfield	1,827,571	475,945
504	Hwy. 620—Apsley	—	127,852
505	Hwy. 46—Uphill	—	67,864
506	Plevna—Hwy. 41	78,880	163,744
507	Hwy. 28 (Lakefield)—Hwy. 503	343,718	271,397

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
508	Burnstown—Black Donald Mines	\$ 8,468	\$ 165,037
509	Hwy. 7—Snow Road Station	1,763	175,211
510	Magnetawan—Hwy. 124	—	10,726
511	Brightside—Hwy. 508	26,775	139,877
512	Eganville—Hwy. 60	30,461	158,177
513	Hwy. 132—E. of Hyndford	2,945	85,889
514	Hwy. 500—Hwy. 515	131	46,915
515	Hwy. 512—Combermere	2,965	191,547
517	Twp. Road (near New Carlow)—Hwy. 62	—	53,552
518	Sand Lake—Hwy. 69	91,141	418,135
519	Hwy. 121—Redstone Lake	106,445	182,367
520	Burk's Falls—Ardberg	328,241	211,616
522	Hwy. 11—West of Loring	1,911,747	448,392
523	Lyell Twp. Line—Hwy. 60	88,855	68,342
524	Hwy. 522—Hwy. 534 (E. of Restoule)	12,881	17,895
526	Hwy. 69—W. of Britt	22	17,961
527	Jct. Hwys. 11 & 17 Northerly	218,472	750,252
528	Wolseley Bay—Hwy. 64	11,048	65,337
528A	Pine Cove Landing—Hwy. 528	—	21,877
529	Hwy. 69—Hwy. 69 (Magnetawan River)	149	122,812
529A	Hwy. 529—Bayfield Wharf	28	29,158
530	Hwy. 519—Hwy. 35 (Carnarvon)	—	66,207
531	Bonfield—Hwy. 17	—	11,710
532	Hwy. 11 (S. of Bracebridge)—Hwy. 69	—	50,166
533	Mattawa—Hwy. 63	188,747	212,690
534	Powassan—Restoule	384,278	213,684
535	Hwy. 64—Riviere Veuve	—	266,723
537	Hwy. 69—Hwy. 17 (Wahnapitae)	115,725	130,217
538	Algoma Miners Loop	—	27,151
539	Hwy. 64—Warren	6,482	282,753
539A	Hwy. 539—Tert. Road 805	—	23,013
540	Little Current—Meldrum Bay	148,360	637,729
540A	Hwy. 540—Barrie Island	31	38,239
540B	Manitoulin Island	8,606	—
542	Hwy. 68—Gore Bay	243,119	398,781
542A	Hwy. 542—Tehkummah	14	9,322
546	Hwy. 17—Mississagai Prov. Park	75	328,135
547	Hwy. 101—Hawk Jct.	—	19,251
548	Around St. Joseph Island—Hwy. 17	61,284	266,618
549	Lake Panache—Hwy. 17	51,651	62,324
550	Sault Ste Marie—Gross Cap	3,207	31,949
551	Province Bay—Hwy. 540	1,774	121,491
552	Hwy. 556—Twp. Road (E. of Hwy. 17)	37,128	72,602
552A	Hwy. 552—Hwy. 17	—	5,073
553	Massey—Bull Lake Lodge	45,765	153,305
554	Hwy. 546—Hwy. 129	273,038	62,490
555	Magog Lake—Hwy. 557	52,572	42,876
556	Hwy. 17 (Heyden) N. Easterly	6,192	532,801
557	Blind River northerly	76,217	76,512
558	Haileybury—Montreal River	—	117,590
559	Hwy. 69 Nobel—Hwy. 69	—	77,310
560	Hwy. 11—Hwy. 144 (S. of Gogama)	1,112,304	715,348

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
560A	Westree—Hwy. 560	\$ —	\$ 35,628
561	Bruce Mines—Hwy. 638	47,439	80,058
562	Hwy. 11 (E. of Thornloe)—Hwy. 65	7,822	54,165
563	Batchawana—Hwy. 17	—	17,235
564	Blanche River Bridge—Hwy. 112	—	34,695
565	Pte Aux Pins — Hwy. 550	68	5,073
566	Matachenan — Ashley Mine	—	95,320
567	E. of Silver Centre—N. Cobalt	—	178,490
568	Hwy. 11—Kenogami	—	11,565
569	Hwy. 11—Hwy. 11 (S. of Englehart)	490,992	134,017
570	Sesekinoko—Hwy. 11	—	40,258
571	Hwy. 562—Earlton	—	10,631
572	Hwy. 11 Ramore—Hwy. 101	175	83,193
573	Charlton—Hwy. 11	—	82,968
574	Cochrane—Norembega	—	100,507
575	Jct. Hwy. 17—Jct. Hwy. 64	189	121,348
576	Hwy. 101—Kam-Kotia Mine	—	85,052
577	Hwy. 101—Iroquois Falls	253,496	84,843
578	Iroquois Falls—Hwy. 11	—	28,589
579	Cochrane—Gardiner	42,019	186,739
580	Hwy. 11—Lake Nipigon	—	35,206
581	Hwy. 11—Remi Lake	—	17,721
582	Hwy. 11 & 17—Loop at Hurkett	—	18,289
583	Mead—Lac Ste Therese	10	164,798
584	Hard Rock Mine—Nakina	189,747	185,173
585	Hwy. 11—Pine Portage	—	102,417
586	Hwy. 11—Lower Shebandowan Lake	—	15,088
587	Silver Islet—Hwy. 11 & 17	164,641	165,854
588	Stanley—Round Lake Road	10,158	249,584
589	Hwys 11A & 17A—Dog Lake Road	700	85,500
590	Hwy. 130—Hwy. 588 (Nolalu)	1,700,699	67,211
591	Hwy. 589 northerly	231,630	30,514
592	Hwy. 11 (Novar)—Hwy. 11	19,371	59,919
593	Hwy. 61—Hwy. 588 (Nolalu)	—	369,201
594	Dryden—Hwy. 17	616	94,747
595	Hwy. 597—Hwy. 590	225,647	142,461
596	Kenora—N. of Minaki	—	220,001
597	Pardee—Hwy. 608	599	48,302
598	Hwy. 604—Hwy. 128 (N. of Kenora)	—	10,153
599	Ignace—Tert. Road 808	2,912,504	856,226
600	Hwy. 71—Rainy River	117,181	747,210
601	Hwy. 17—Dryden	—	58,558
602	Fort Frances —Emo	—	153,544
603	Hwy. 17—Dyment	—	11,098
604	Hwy. 17—Kenora Airport	—	21,015
605	Hwy. 17—Eton—Rugby	—	28,571
607	Hwy. 69—(Big Wood—Hwy. 64)	—	62,209
607A	French River—Hwy. 607	—	13,146
608	Hwy. 61—Hwy. 595 (S. Gillies)	110,919	62,520
609	Hwy. 105—Clay Lake	—	42,373
610	Hwy. 67—Hwy. 101 (Hoyle)	200,149	102,475
611	Hwy. 602 (Sherwood) Northerly	79,860	54,238

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
612	Hwy. 103 (Mactier)—Hwy. 69	\$ —	\$ 14,795
613	Hwy. 602—Lake Despair	86,357	101,757
614	Hwy. 17—Manitouwadge	6,774	176,916
615	Hwy. 17—Burditt Lake	—	118,357
616	Hwy. 101—Palomar	—	10,631
617	Hwy. 11 (Stratton)—Hwy. 600	5,332	67,218
618	Red Lake—Madsen	764	28,099
619	Hwy. 11 (Pinewood)—Hwy. 621	43,529	134,390
620	Hwy. 62—Hwy. 28 (Apsley)	27,208	137,388
620A	Hwy. 28—Hwy. 620	—	1,571
621	Hwy. 11—Lake of the Woods	—	212,708
622	Hwy. 11 (Atikokan) Northerly	279,557	35,326
623	Hwy. 11—Sapawe	300	8,340
624	Hwy. 11—Larder Lake	—	93,572
625	Caramat—Hwy. 11	—	91,443
626	Jct. Hwy. 17 to Marathon	—	12,163
627	Heron Bay—Hwy. 17	1,355,066	26,372
628	Red Rock—Hwys 11 & 17	—	20,118
629	Timmins—Timmins Airport	904,507	26,874
630	Kiosk—Hwy. 17	710	99,646
631	Hwy. 17—Hwy. 11	160,834	638,738
632	Hwy. 118—Rosseau	—	48,442
633	Hwy. 11—Kawene	—	16,917
634	Smooth Rock Falls—Eraserdale	295,709	257,030
635	Hwy. 17—Ottawa River Bridge	—	7,807
636	Hwy. 11—Frederick House	—	16,792
637	Hwy. 69—Killarney	24,945	261,025
638	Dunns Valley—Echo Bay	7,645	142,954
639	Hwy. 108—Hwy. 546	136	88,285
640	Hwy. 571—Earlton Airport Entrance	—	11,671
641	Hwy. 17—Pellatt	25,100	35,215
642	Hwy. 599—Sioux Lookout	3,991	287,307
643	Hwy. 584—Twp. Road to Cavell	—	55,780
644	Hwy. 69 (Pte. Au Baril) Westerly	6	4,854
645	Hwy. 529—Bing Inlet	24	19,417
646	Pickle Crow—Central Patricia	2,657,378	30,634
647	Hwy. 17—Blue Lake Prov. Park	—	19,834
648	Dyno Mine—West Jct. Hwy. 121	6,336	175,113
649	Bobcaygeon—Hwy. 121	—	62,674
650	O.N.R. Right-of-Way—Hwy. 12	—	22,822
651	Hwy. 101—Missanabie	—	225,950
652	Wade Lake—Hwy. 574	105,411	61,547
653	Portage Due Fonte Bridge—Hwy. 17	—	63,968
654	Hwy. 11—Nipissing	—	96,313
655	Timmins—Ward Kidd Twp. Boundary	1,572,186	270,338
656	Hwy. 533 northerly	—	12,110
657	Gold Pines—Hwy. 105	—	14,167
659	Hwy. 604—Hwy. 128	—	55,173
660	Bala—Hwy. 103	—	65,097
661	Gogama—Hwy. 144	—	10,631
663	Hwy. 11 (W. of Hearst) Northerly	352,468	24,009
664	Hudson—Hwy. 72	214,077	43,938

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
665	Hwy. 17—Richan	\$ 59,681	\$ 75,597
666	Kenora—Redditt	109,913	86,724
667	Hwy. 129—Sutton	1,901,622	148,130
	TOTAL SECONDARY HIGHWAYS	24,930,248	20,393,715
TERTIARY ROADS			
801	Hwy. 11—Namewanikan River	—	40,348
802	Hwy. 11—Burchell Lake	—	41,710
803	Hwy. 575—(Hwy. 101 — 3 mile south)	228,212	8,501
804	Hwy. 105 (lower Manitou Falls)	—	44,500
805	Hwy. 539A (River Valley)—Pond Lake	—	95,317
808	Hwy. 646—Otosilwin River	169,552	198,878
809	Hwy. 564—End of Highway	—	8,501
810	Hwy. 553—Richie Falls	247	172,448
811	Tertiary Road 800 northwesterly	—	76,844
812	Manitou Road—Hwy. 11 northerly	4,066,360	61,559
813	Riding Stable Access Road	2,650	154,037
	TOTAL TERTIARY ROADS	4,467,021	902,643
ACCESS, INDUSTRIAL & ARTERIAL ROADS			
722	Red Lake (Balmer Town)	436,840	—
708	Marchington Lake Road	3,744,062	—
709	Anaconda Road	—	10,378
730	Mining Access—N. of Central Patricia	301,193	—
751	Arterial Road—Jane St. S'ly to S. Queens Dr.	2,798,180	—
758	N. of Hwy. 17 to Armstrong/Hurkett	5,946	72,725
773	Garden Lake Road	—	—
778	Industrial Road—Hwy. 144 West to Sultan	—	33,919
784	Arterial Rd.—Lawrence Ave. S'ly to Trethewey Drive	15,861	—
785	Bending Lake Access Road	1,857,584	—
792	Hwy. 17—Dubreaulville Townsite	—	78,750
795	Sherman Mine Road	—	1,583
799	Caramat-Manitouwadge Road	—	135,610
	TOTAL ACCESS, INDUSTRIAL & ARTERIAL ROADS	9,159,666	332,965
UNINCORPORATED TOWNSHIPS			
2	Indian Reserves	50,806	52,032
7	Special Settlers	504,487	196,165
9	Local Roads Boards	1,638,088	2,637,430
99	Statute Labour Boards	34,988	135,677
	TOTAL UNINCORPORATED TOWNSHIPS	2,228,369	3,021,304
SPECIAL PROGRAMS			
450	Other Ferry Service	108,512	2,331,630
704	Welland Canal	10,490	—
731	Sudbury By-pass	82,305	—
732	North Bay By-pass	20,253	—
735	Kitchener-Waterloo Expressway	1,034,742	239,930
765	Townline Road Tunnel	—	18,181
790	Hydro Development Road	1,400	—
797	Airstrip Development	4,261,627	1,268,822
952	Sidewalks	70,216	—

KING'S HIGHWAYS

HIGHWAY NUMBER	LOCATION	CONSTRUCTION	MAINTENANCE
955	Commuter Rail	\$ 426,101	\$ —
7087	E.C. Row Expressway	8,684,470	18,185
7118	Brantford Expressway	—	17,548
7154	Lakehead Expressway	843,792	—
7163	Township of Tisdale	473,068	—
8905	Lands & Buildings	1,583,608	119,353
8954	Weigh Scales	5,652	—
	Development Roads	5,450,458	—
	Connecting Links	16,161,708	1,332,550
	TOTAL SPECIAL PROGRAMS	39,218,402	5,346,199
HIGHWAY TOTALS		310,864,175	115,988,527
	Sundry Unallocated, District Office		
	Administration, Engineering, Buildings,		
	Inventory Charges, etc.	(68,293,667)	20,784,959
	TOTAL EXPENDITURE	242,570,508	136,773,486

NOTES

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